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Thesis

THE INFLUENCE OF THE PROHIBITION ERA ON THE
STRUCTURE OF THE WHISKEY INDUSTRY

by

Robert Louis Koller
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Approved
by

First Reader...
Asst Professor of Economics

Second Reader Frank S. Dood ....
Ass't Professor of Economics

TABLE OF CONTENTS

TABLES AND CHARTS

TABLES AND CHARTS
(continued)

INTRODUCTION

INTRODUCTION

The growth and economic organization of an industry are usually the result of a great number of different forces. Some of these forces are economic in nature and some are of a more indeterminate character. It cannot be said that the growth of an industry is the result of any single force. The principle of the mutual interdependency of forces must be constantly kept in mind when considering any social endeavor. Thus, the problem of determining and evaluating the factors responsible for the growth and organization of an industry is a difficult one.

The development and structure of the post-prohibition whiskey industry lends itself to the application of a more accurate analysis than can usually be applied to the study of an industry. The period of time during which the whiskey industry developed has not been long; and, although the factors which have influenced this development have been numerous, certain important influences can be identified and evaluated. A study of the reëstablishment of the whiskey industry offers an opportunity to observe under relatively favorable conditions the development of an industry. Certainly, the concentrated growth of the industry since 1933 is subject to a more definite assignment of cause and effect relationships than can generally be made.

The objective of this paper will be to show that the post-prohibition industry was moulded to a certain extent by factors

arising out of the era of prohibition (1920-1933). To provide a suitable frame of reference, the structure of the pre-prohibition industry will be examined. Next, certain of the influencing factors responsible for the development and structure of the post-prohibition industry arising out of the illicit nature of the manufacture and consumption of whiskey during the era of prohibition will be reviewed. To be specifically considered are the results of these influences on demand, foreign competition, profit opportunities, marketing, production, and government regulation. Finally, the economic structure of the contemporary industry will be discussed to show how it was influenced by these factors resulting from the prohibition era.

The intended orientation of this paper was made economic in nature. Such controversial questions as the social value of prohibition versus non-prohibition have been consciously avoided. These are problems which are, in most respects, beyond the competence of the economist. The primary concern of this thesis is with the growth and structure of the whiskey industry and with the factors responsible for this development and organization.

CHAPTER I

THE PRE-PROHIBITION INDUSTRY 1861-1919

THE PRE-PROHIBITION INDUSTRY

This chapter is an attempt to analyze the economic structure of the whiskey industry in the era before prohibition. The analysis is made in order to show more clearly the effect of certain influences arising out of the prohibition era on the growth and structure of the industry after repeal. The first part of the chapter is devoted to an historical review of the trend toward monopoly in this early period. The latter section of this chapter attempts to draw general conclusions concerning the economic organization of the industry before prohibition.

The alcohol manufacturing industry first began to assume importance in the United States after the Civil War. Previous to the Civil War, alcohol production was of minor importance. Distilling was in the hands of a large number of small, home producers manufacturing almost entirely for [illegible] purposes. However, with the change in the American economy from a manufacturing economy to an agricultural economy, alcohol production began to assume importance on an industrial level. Alcohol was used for the production of patent medicines, burning fluids, perfumeries, cooking, varnish, and furniture polish.(1) In addition, the use of alcohol as a beverage increased considerably after the Civil War. In 1860, for example, per-capita consumption of distilled spirits was [illegible] gallons per year. In 1871, this figure had risen to [illegible].(2)

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(1) New International Encyclopedia (New York, Dodd, Mead and Company, 1920), Second Edition, Vol. XVIII, p. [illegible].
(2) Beverage Distilling Industry, Facts and Figures, 1934-1945 (New York, Licensed Beverage Industries, Inc.) 1946, p. 71.

The First Whiskey Pool, 1871

The first attempt at the formation of any sort of a combination of distillers to maintain a degree of control over the market occurred in 1871. The most important reason for its formation, from an economic point of view, was the governmental fiscal policy during the Civil War. As part of the general policy of imposing excise taxes to help finance the war, the taxes on alcohol were materially increased, whereas previously they had been nominal. On July 1, 1862, the tax was made 20 cents per gallon; on March 7, 1864, 60 cents a gallon; on July 1, 1864, $1.50 a gallon; and on January 1, 1865, a tax of $2 was levied.[3] At each increase of the tax rate, a considerable time elapsed before the highest rate was to be applied. This caused a scramble to get plants into operation before the new, higher rate was imposed.

> "Some time intervened before the various amounts were collected, and during this time the distiller and the speculator had nearly the whole benefit of the tax without paying it. The speculation in whiskey during this time was tremendous. Editors, ministers, statesmen - all took a hand. Distilleries were erected all over the country, and at the end of the war there was three times the capacity that could be utilized."[4]

It was during this period that the great whiskey scandal

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(3) Ibid., p. 71.

(4) Ripley, Trusts, Pools and Corporations (New York, Ginn and Company, 1905), p. 27.

occurred in the industry.(9)

The effects of the increased revenue tax were felt not only on the production side of the distilling industry, but on the consumption side as well. Previous to the imposition of the relatively high excise taxes, alcohol was widely used for such purposes as burning fluids and cooking. When alcohol rose from about 40 cents a gallon to well over $2 a gallon, the use of it was severely curtailed for these purposes.

Thus, the alcoholic beverage industry found itself in the position of possessing considerably increased productive facilities and materially reduced demand. The obvious answer to this problem was to curtail production. In 1871, all of the distilleries north of the Ohio River, the heart of the distilling industry, agreed to limit production to two-thirds of capacity.

This pool type of control soon passed when severe crop failures in Europe from [illegible] increased the demand for U. S. exports of whiskey. The following table indicates spirits removed for export during this period:

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(9) This was an association of internal revenue officials and distillers formed during the administration of President Grant for the purpose of defrauding the government of the excise tax on distilled spirits. It was shown by a Committee of Representatives investigating the whiskey ring, during the ten months ending May 1, 1875, the government had been defrauded of nearly $1,[illegible],000 in taxes.
Source: New International Encyclopedia (New York, Dodd, Mead and Company, 1922), Second Edition, Vol. XXIII, p. 512.

Table II

SPIRITS REMOVED IN BOND FOR EXPORT

Year	Taxable Proof gal. Exported	% of total prod.	Year	Taxable Proof gal. Exported	% of total prod.
1873	2,353,630	3.45%	1881	15,926,452	13.52%
1874	4,000,160	5.9[illegible]%	1882	[illegible],592,725	7.64%
1875	587,413	0.96%	1883	5,386,427	7.19%
1876	1,306,900	2.25%	1884	9,5[illegible],735	12.70%
1877	2,529,528	4.28%	1885	10,671,615	14.24%
1878	5,499,252	9.80%	1886	5,646,656	7.02%
1879	14,837,581	2[illegible].63%	1887	2,[illegible]3,913	2.85%
1880	16,765,[illegible]	15.55%	1888	1,514,505	2.15%

Source: Report of the Commission of Internal Revenue, 1886.
(taken from Ripley, Trusts, Pools and Corporations,
p. 25.)

The Western Export Association, 1881

After 1880, good crops in Europe, poor crops at home, and some changes in the tariff laws of leading European countries, especially duties against the United States, cut off this demand, and left the distilleries of this country with a capacity to produce four times what the home market could absorb.(6)

This caused great over-production and distress among the distillers. They could not export except at a loss; their cattle were in the barns (the feeding of cattle on the slop from the distilleries was an important adjunct of the distilling business), so that it was difficult to close the distilleries; their warehouses were filled, and the market was broken. In November 1881, a general meeting was called to form a pool. The Western Export Association was formed, the officers of which were authorized to levy a monthly assessment on each distiller running his distillery. This assessment was to be proportionate to the amount of grain used in manufacture, and high enough to pay the losses arising from the exportation of a quantity of spirits sufficient to relieve the home market.

An appeal was made to Congress, asking that an export bounty be given equal to that granted by Germany; or, if a

(6) Ripley, op. cit., p. 26.

bounty for export should not be given for fear of lessening the revenue, that the internal revenue be raised to $1 and then a bounty of 10 cents for export be granted. Congress and the people, however, had not forgotten the whiskey ring scandal; and, consequently, Congress did not dare legislate in favor of distillers.

This first pool lasted until 1882, when it broke down because certain members refused to pay their assessments. The distillers had been able to keep prices somewhat higher by this means; but, after the breaking of the pool, they ran at low profits, many of them at a loss, or else shut down during the summer - a proceeding which in itself involved a loss. In September, 1882, they organized again for the year on a similar plan; but it was found necessary to make an attempt to limit the output of the distilleries to a small percentage of their capacity, in addition to the relief of the market by exporting. However, this new pool met with the same fate as that of its predecessor.

From 1882-1887, there were several attempts to reactivate the pool. They met with varying degrees of success. Usually, the pool would exist for a year and then suspend its operations for a period of time. Sometimes these pools attempted to limit production and sometimes they did not. Various attempts were made by the pool to limit prices and to subsidize the exportation of the surplus production. The following table indicates pool assessments from September,

1884, to April, 1887:

TABLE #2

POOL ASSESSMENTS

September, 1884-April, 1887

	1884 cents per bu. mashed	1885 cents per bu. mashed	1886 cents per bu. mashed	1887 cents per bu. mashed
January		9	16	3
February		6	9	3
March		6	10	4
April		6	10	4
May		7	10	
June		9	8	
July		9	4	
August		9	6	
September	6		3	
October	6		3	
November	6	12 per gallon	3	
December	8	12	3	

Source: J. M. Atherton; Testimony before Congressional Committee on Manufacturing, p. 7. (taken from Ripley, Trust, Pools and Corporations)

<u>The Distillers' and Cattle Feeders' Trust, 1887</u>

Generally, these pools were unsuccessful in effecting any sort of monopoly control in the industry. The pooling agreements suffered from the usual defect of all pool agreements. The pool had no means by which it could exert its authority over the member firms. Hence, if a firm saw an opportunity to make a quick profit by undercutting the price set by the pool, it could easily do so without fear of legal action by the pool. Another reason was that the amount of capital necessary to establish a distillery was relatively small. If economic conditions were favorable to the industry, many small distilleries could be established almost overnight to take advantage of the favorable conditions. This served to weaken whatever hold the pool may have had upon the market.

Because of the fact that the pools were unable to maintain prices and eliminate competition, a new type of organization, modeled along the lines of the then recently formed Standard Oil Trust, was evolved. The former members of the old pool became members of the new organization which was called "The Distillers' and Cattle Feeders' Trust." The former members of the old pool assigned a majority of their stock certificates to the trust and received trust certificates in return. The par value of the trust certificates was $100. The trust certificates were supposed to represent, as nearly as possible, the cash value of the equipment of the

various firms which made up the trust. The trust was to continue for twenty-five years, after which time it could be disolved by a vote representing 66 2/3 of the value of the trust certificates.

The trust was to be run by a board of trustees composed of nine men operating under a $100,000 bond. Their duties were as follows:

> "exercise supervision so far as their ownership of stock enables them to do over the several corporations or associations whose stock is held by said trustees. As stockholders of said corporations they shall elect or endeavor to elect honest and competent men as directors thereof, who shall be paid a reasonable compensation for their services. They may elect themselves as such directors and officers, and shall endeavor to secure such judicious and efficient management of such corporations as shall be most conductive to the interests of the holders of the trust certificates."(7)

At the first meeting of the certificate holders, three trustees were elected to hold office for one year, three were elected to hold office for two years, and three were elected to hold office for three years. Thereafter three were to be elected each year to replace the retiring members. In order to be elected to the position of a trustee, it was necessary to hold at least 500 shares of stock. This meant that the men who controlled the individual firms making up the trust also controlled the trust.

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(7) Ripley, op. cit., p. 31.

The trust controlled the member firms by various means. First, they appointed the managers of the various member distilleries. Second, they maintained a close watch on the activities of the member firms through a complex recording system which made daily reports from the member distilleries mandatory. However, the most important device for control was the authority of the trust to limit the production of the distilleries or close them altogether. This type of firm control enabled the trust to control the productive facilities of the industry to such an extent that the former device of assessments to subsidize the export surplus was no longer required.

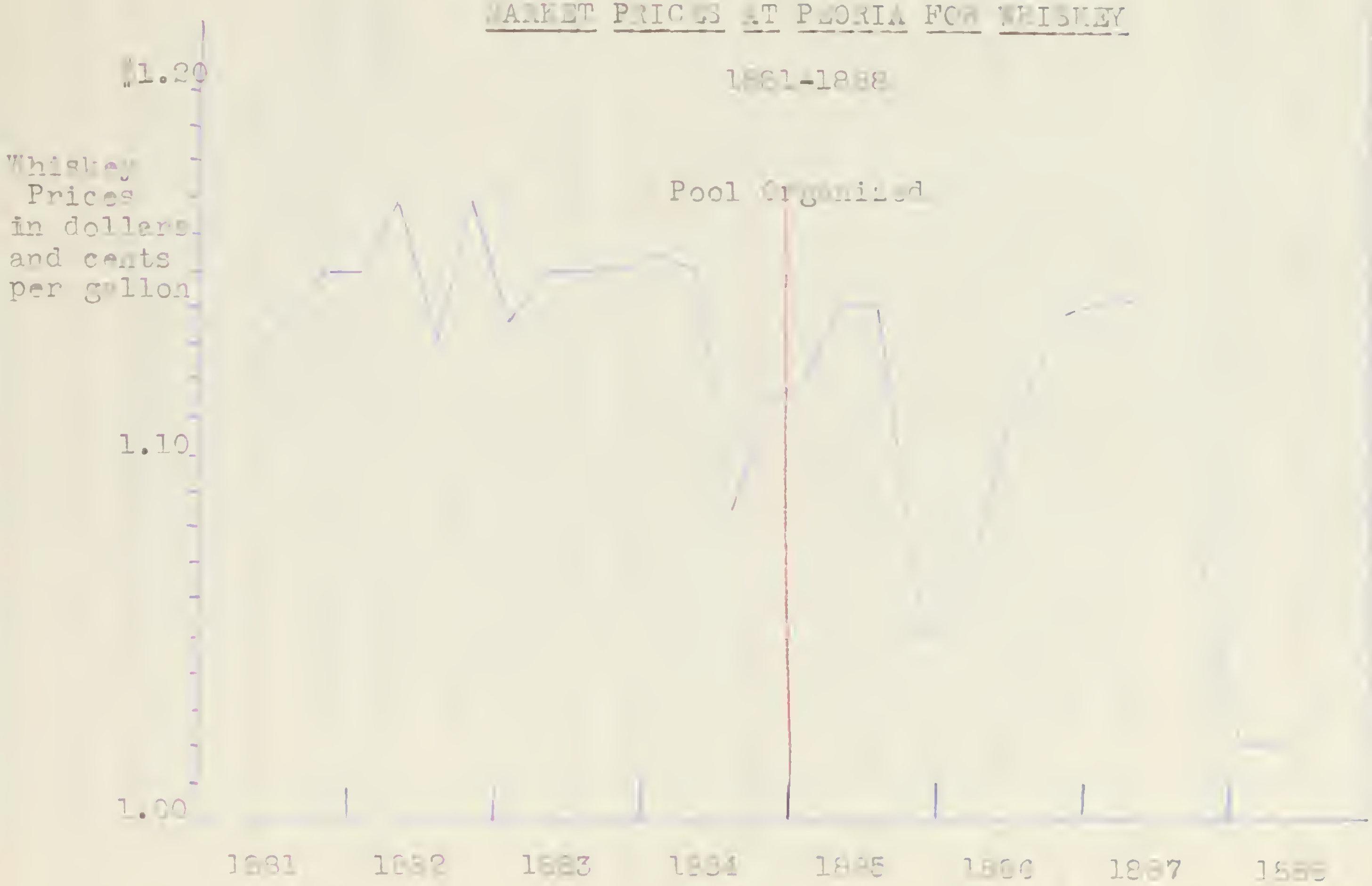
At the outset of the trust there were [illegible] member distilleries. In 1889, the trust had closed all but 12 of these distilleries. These 12 distilleries supplied the market. The prices of whiskey and corn were not materially altered by the trust and remained fairly constant except for periods during which the trust was engaged in driving competitors from the field. One of these periods of low prices occurred during the first six months of the trust. It was found that all of the former members of the trust were not willing to join the new trust. Thus, the trust, in order to force them to join, lowered prices until this objective was accomplished. When all of the former members of the pool had become members of the trust, prices were moved up to their previous level. However, this price manipulation had an

adverse effect upon the industry. The price rise, which was put into effect after the recalcitrant pool members had joined the Trust, had the consequence of causing other producers to enter the field of distilling. Hence, the trust was obliged to lower prices again in [illegible] to force potential competitors out of the market. Although the price decrease amounted to only 10 per cent, it had the effect of closing the firms which had entered the market in response to the higher price. The chart on the following page indicates the market fluctuations in the price of whiskey on the whiskey exchange at Peoria during this period.

CHART # 3

MARKET PRICES AT PEORIA FOR WHISKEY

1881-1888



Source: Reports of the U. S. Internal Revenue Commission, 1881-1888.

The first price reduction occured in September 1885, when the price was reduced from $1.14 to $1.05 on a gallon of whiskey. The price was restored in October of the following year. The second price reduction occured in June 1887, when the price was again dropped from $1.14 a gallon to $1.05 a gallon.

The Distilling and Cattle Feeding Company, 1889

However, it was about this time that public sentiment was being aroused against the various combination movements that had been occuring on a large scale during this decade in imitation of the original Standard Oil Trust. To avoid unfavorable publicity and possible legal action under any of the various state anti-trust laws, the trust was reorganized into a corporation called the Distilling and Cattle Feeding Company. The trustees of the former corporation subscribed for all of the stock of the new corporation and elected themselves as members of the board of directors. The majority of the directors of each of the companies within the trust ordered a conveyance of all the property held by the trust corporation to the new corporation. As directors of the corporations they exchanged the trust certificates for shares in the new corporation. Ownership by the new corporation was extended to include almost all of the competing distilleries. However, The Distilling and Cattle Feeding Company did not become the stabilizer that its members had hoped that it would. This was because the new company

experienced a series of scandalous speculations.

Finally, suit was brought against the company in the State of Illinois for revocation of its charter on the grounds that the company had created a monopoly in manufacture and distribution. In 1895, the charter of the corporation was revoked. The statement of the court was as follows:

> "There can be no doubt, we think, that the Distillers' and Cattle Feeders' Trust, which preceded the incorporation of the defendent, was an organization which contravened well-established principles of public policy, and it was therefore illegal. The new corporation succeeded to the trust, and its operations are to be carried on in the same way, for the same purposes, and by the same agencies as before. The trust then being repugnant to public policy and illegal, it is impossible to see why the same is not true of the corporation which succeeds to it and takes its place. The control exercised over the distillery business of the country---over production and prices---and the virtual monopoly formerly held by the trust are in no degree changed or relaxed, but the method and purposes of the trust are perpetuated and carried on with the same persistence and vigor as before the organization of the corporation. There is no magic in a corporative organization which can purge the trust scheme of its illegality, and it remains as essentially opposed to the principles of sound public policy as when the trust was in existence. It was illegal before, and it is illegal still, and for the same reasons."(8)

In answer to the objection that the defendent corporation by its charter was authorized to purchase and own distillery

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(8) Supreme Court of Illinois, Distilling and Cattle Feeding Company v. People, 156 Ill. 448, (1895).

property, and that there was no limit to the amount of property that they might thus acquire, the court said:

> "It should be remembered that grants of power in corporate charters are to be construed strictly, and that which is not clearly given is by implication denied. The defendent is authorized to own such property as is necessary to carry on its distilling business, and no more. Its power to acquire and hold property is limited to that purpose, and it has no power by its charter to enter upon a scheme of getting into its hands and under its control all, or substantially all, the distilling plants and the distilling business of the country, for the purpose of controlling production and prices, of crushing out competition, and of establishing a vertual monopoly in the business. All such purposes are foreign to the powers granted by the charter. Acquisitions of property to such an extent and for such purposes do not come within the authority to own necessary property for the purpose of carrying on a general distillery business. In acquiring properties in the manner and for the purposes shown by the information, the defendent has not only misused and abused the powers granted by its charter, but has usurped and exercised powers not conferred by, but which are wholly foreign to that instrument. It has thus rendered itself liable to prosecution by the state by quo warranto. We are of the opinion that upon the facts shown by the information, the judgement of ouster is clearly warranted."(9)

The Distilling Company of America

After the revocation of the charter of the Distilling and Cattle Feeding Corporation in Illinois, the company reorganized in New York State under the name of the American

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(9) Supreme Court of Illinois, op. cit.

Spirits Manufacturing Corporation. The former, took over the several and best distilleries in the field. Other plants and branches of the industry were independently incorporated under the laws of New Jersey in four major companies. In 1899 these four companies were united again into the American Spirits Manufacturing Corporation. The name given to this new entity was the Distilling Company of America, and it was capitalized at $125,000,000.(10) Eventually, over 90% of the securities of this company were acquired by the Distillers Security Corporation, a holding company organized in New Jersey.(11) This holding company, reorganized in 1919, became the U. S. Food Products Corporation.

The U. S. Food Products Corporation became the National Distillers Products Corporation in 1924, and held together in one form or another, until the 1930s as one of the strongest firms in the industry. During the First World War the company made a profit of $10,000,000 out of alcohol production.(12) However, the national prohibition law in 1919 forced it to drop its distilling operations. It entered into the production of yeast, cereal products, and molasses. The depression of 1921, however, caught it defenseless, and the banks forced the corporation into receivership. In 1924, when the

(10) Moody's Manual of Investments (New York, Moody's Investment Service), 1927, p. 2427.
(11) Ibid.
(12) Fortune Magazine, "National Distillers Products Corporation," Volume VIII, Number 3, p. 55.

depression was over, the banks reorganized the company and changed its name to the National Distillers Products Corporation. The corporation disposed of its yeast and cereal businesses and concentrated on the production of medicinal whiskeys. During the years between the formation of the National Distillers Products Corporation and the repeal of the 18th Amendment, the company gained possession, through the purchase of warehouse receipts, of about nine million gallons of whiskey. This nine million gallons constituted almost the entire U. S. supply of whiskey; and, when the Volstead Act was repealed, the National Distillers Products Corporation was in a position to dominate the U. S. market.

From the discussion of the historical development of the pre-prohibition whiskey industry, a few generalizations may be made relevant to the structure of the industry during this period.

Essentially, it may be said that the economic structure of the industry was such that a relatively pure type of competition could have existed. Secondly, it may be stated, however, that this type of economic organization was challenged constantly by various attempts to introduce monopolistic elements into the structure.

By the concept of "competition" is meant the relationship among the buyers and the sellers in a particular market. The

distinguishing feature of a pure type of competition is that no individual buyer or seller can influence the market price by his own efforts. According to economic theory, such a situation will be found only when the following conditions are realized:

1. Standardized Product. The products of the various sellers must be identical in form and must be regarded as such by the purchasers. This condition was met in the pre-prohibition industry in that the product sold was homogeneous raw whiskey. The whiskey produced and sold by the distiller was not aged, blended, or bottled. These functions of aging, blending, and bottling were performed by a large number of small rectifiers who purchased the whiskey in bulk from the distiller.

2. Individual sellers do not set their own price. The price is usually determined on a large, centralized market. Peoria was the market in which raw whiskey was sold by the distiller and purchased by the rectifier. It was in this market that the factors of supply and demand were brought into focus and the price was determined. The whiskey market of the pre-prohibition era functioned in much the same manner that the wheat market of the present day operates.

3. A large number of sellers, each acting independently. The number of sellers during this period was relatively large. No statistics are available to indicate the number before the turn of the century. However, from 1900, the date of the first Census of Manufactures, some indication is given of

the number of sellers in the market. The table which follows shows the number of distillers from 1899 to 1931 as well as total production of whiskey during these years. From the table, it can be seen that each distillery, on the average, was responsible for a small percentage of the total production of the industry. However, this table gives no indication of the number of sellers controlled or owned by the Distilling Company of America.

TABLE 14

NUMBER OF DISTILLERIES OPERATED AND TOTAL WHISKEY PRODUCTION
1899-1931

Year	Number of Distilleries	Total Production (tax gallons)
1899	965	
1901		79,701,170
1902		75,414,812
1903		70,673,971
1904	805	60,606,978
1905		71,097,421
1906		70,633,074
1907		86,552,651
1908		54,502,027
1909	613	70,152,174
1910		82,463,894
1911		100,647,155
1912		98,209,574
1913		99,615,[illegible]
1914	434	88,608,797
1915		44,552,499
1916		59,240,671
1917		57,651,874
1918		17,383,511
1919	34	-
1920		234,705
1921	33	753,374
1922		315,799
1923	30	-
1924		-
1925	31	-
1926		-
1927	28	-
1928		-
1929	30	-
1930		1,098,947
1931	27	-

Firms operating during the period of prohibition produced no whiskey except in 1930. Manufacturing during this period consisted of blending existing stocks for medicinal purposes.

Source: Bureau of the Census, *Census of Manufacturing*, 1899, 1904, 1909, 1914, 1919, 1921, 1923, 1925, 1927, 1929, and 1930.

4. Freedom of entry. There is difficulty in establishing this criterion quantitatively. It cannot be stated definitely that it was possible for a firm to enter the market at will because of a lack of figures to indicate the movement of firms into the industry in response to price changes. However, according to Risley, this phenomena did occur on many occasions before the turn of the century in response to high prices established by the various short-lived pooling arrangements.

5. Freedom from external control of price and output levels. This refers essentially to government action to establish prices or control production. During the era under consideration, there was no government interference to manipulate either prices or production.

6. All selling activities, such as advertising and the use of brand names, are absent. These activities are of no use to a firm as long as it remains in pure competition. The firm can sell as much as it desires at the market price and nothing above that price. Hence, there would be no reason to engage in any of the above activities. The pre-prohibition distiller was engaged in none of these activities, because he produced a standardized product for sale on an organized market of buyers and sellers.

The pre-prohibition whiskey industry was made up of a large number of small producers operating in a condition of relatively pure competition.

The second important characteristic of this period was the persistent attempt toward some form of monopoly control in the form of trusts, pools, and associations and culminating in the formation of the Distilling Company of America. One of the reasons for the failure of many of the attempts at monopoly appears to stem from the fact that the distiller was concerned with only a small number of the productive operations of manufacturing goods and limited delivery.

> "The distillers sold as soon as the product was distilled, and what became of it afterwards was none of their affair."(13)

Because of this fact, the independent distiller was able to cut the price established by monopolistic combines. Because the supercorporations or trusts which were organized had no differentiated product which they could market to the exclusion of all other sellers, and because the trusts and supercorporations had to market their product through the centralized marketing channels, they were unable to exclude the small producer who was willing to sell at a lower price. According to Chamberlin[14] the primary requisite of successful market control is control over the price through product differentiation. This control was lacking in the attempts at consolidation during this era.

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(13) Fortune Magazine, op. cit., p. 77.

(14) Chamberlin, E. H., The Theory of Monopolistic Competition (Cambridge, Harvard University Press), 1947, p. 9.

CHAPTER II

INFLUENCES OF THE ERA OF PROHIBITION

INFLUENCES OF THE ERA OF PROHIBITION

The passage of the 18th Amendment in January, 1920, halted the legal activities of the alcoholic beverage-producing industry and stopped the legitimate consumption of spirituous liquors. However, the cessation of legitimate whiskey manufacture did not cause the production and sale of whiskey to be discontinued. Supplies of whiskey were made available through bootleg production, smuggled foreign production, and home production. Likewise, although consumption of alcoholic beverages was legally prohibited, whiskey and spirited beverages were still consumed.

The fact that demand continued to exist throughout the period of prohibition had important implications for the development of the post-prohibition industry. Further, the type of illegal product which was available during the era of prohibition and the manner in which it was consumed had influences upon the organization of the industry after repeal.

Although demand continued to exist during the period of prohibition and emerged as a strong factor at the inception of repeal, the facilities for supplying this demand had been discontinued during prohibition and, hence, were incapable of satisfying the demand existing immediately after repeal. The existence of this established demand and the non-existence of adequate productive facilities to meet this demand encouraged

the penetration of the American whiskey industry by foreign whiskey producers.

Foreign penetration was one of the factors responsible for the establishment of a high degree of product differentiation in the American whiskey producing industry. Product differentiation was an integral part of the competitive pattern of the foreign producer in manufacturing for his own market. When the foreign distillers entered into operations in the United States, the methods of marketing and production which had proved successful in the [illegible] country were transplanted to operations in this country. This had effects upon the development of the post-prohibition industry.

During the prohibition movement, some of the whiskey produced was of poor quality. In addition, the type of person engaged in illicit whiskey traffic was generally unscrupulous and frequently was involved in other illegal activities. These two factors were responsible in part for the close supervision of many aspects of the post-prohibition industry by the Federal government.

A final result of the prohibition era was the favorable profit opportunities created by repeal. When the 18th Amendment was repealed, the existing market was such that those fortunate enough to be in control of existing stocks of whiskey or adequate productive facilities were in a position to make [illegible] windfall profits. The fact that these profits remained high for a considerable period of time, during which the industry

was being developed to meet the existing demand, served to give impetus to a rapid expansion in stocks and productive facilities in the industry.

A closer examination of these influences arising out of the era of prohibition on the structure and development of the whiskey industry will be the subject of this chapter.

Demand

The fact that demand continued to exist during the period of prohibition had an important influence upon the growth of the post-prohibition whiskey industry. No statistics are available to indicate the magnitude of consumption during the prohibition era. However, there is general agreement among the members of the trade and the [illegible] of the Federal Alcohol Administration that consumption remained relatively high during this period. The chart on the following page indicates per-capita consumption from 1910-1947. Care must be used in evaluating these figures. Although correction has been made to allow for changes in the size of the legal consuming population due to the prohibition of the sale of alcoholic beverages in certain areas, adjustment has not been made for changes in the age composition of the segment of the population that consumes legally. To arrive at an accurate picture of per-capita consumption it would be necessary to attempt to determine the approximate age groups of the population which are responsible for consumption. That this would be an important factor is indicated by the table below showing changes in the composition of the population from 1900-1947.

Table #5

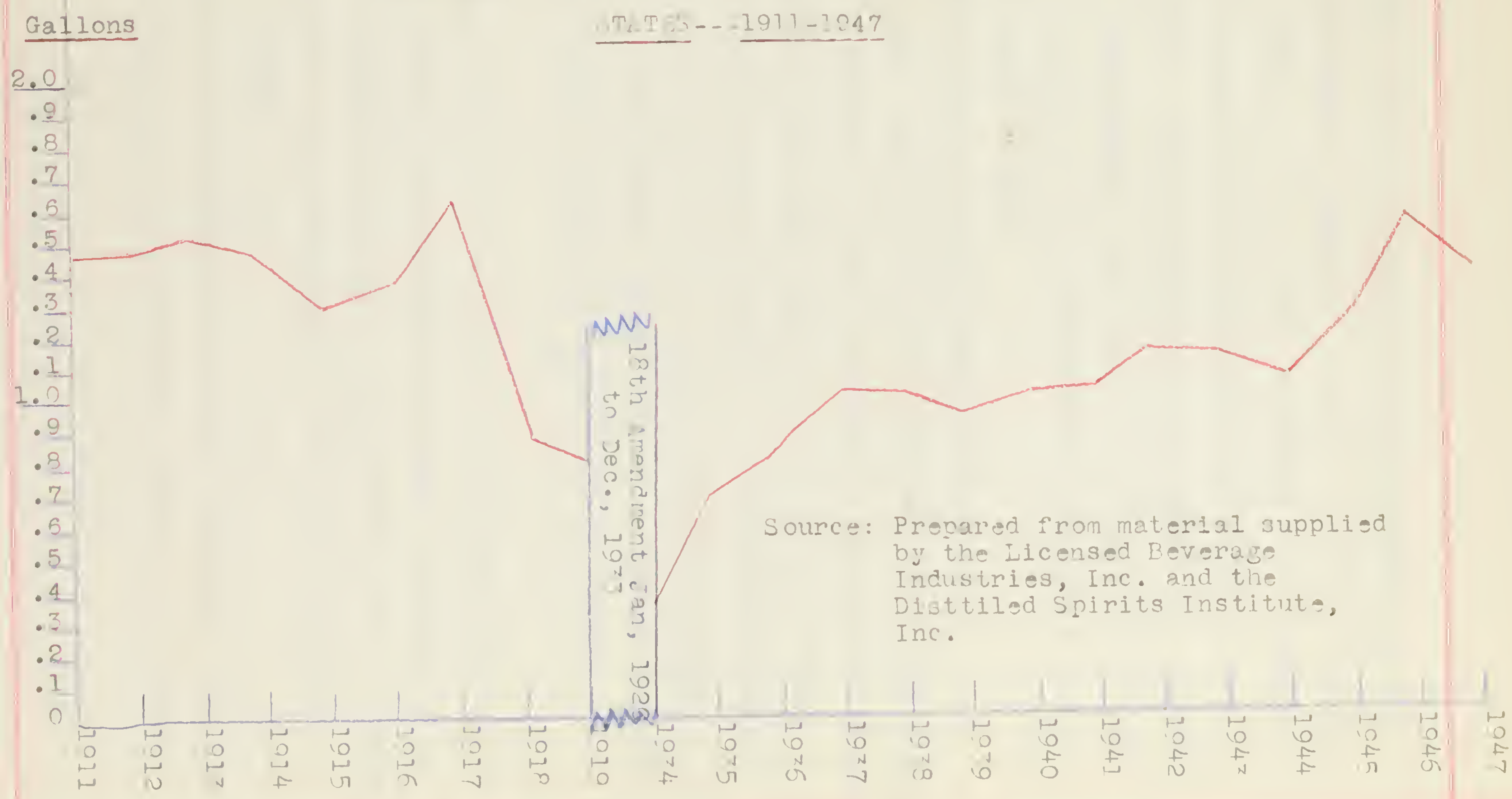
Population by age groups, selected years 1900-1947

	1900	1920	1930	1940	1947
All Ages	75,995,000	105,711,000	122,775,000	131,669,000	143,980,000
Under 20	33,681,000	43,043,000	47,609,000	45,306,000	48,631,000
20-64	39,032,000	57,586,000	68,458,000	77,344,000	84,689,000
65 and over	3,080,000	4,933,000	6,634,000	9,019,000	10,950,000

Source: Department of Commerce

CHART #6

APPARENT AVERAGE ANNUAL PER PERSON CONSUMPTION OF DISTILLED SPIRITS IN THE CONTINENTAL UNITED STATES--1911-1947



This base would change year by year as this segment of the population increased or decreased relative to the total population. In addition, of course, correction would have to be made for the portions of this narrowed base living in areas which were "dry". These computations are beyond the scope of this paper. Nonetheless, some rough indication of per-capita consumption is given by the unrefined data appearing on the chart on the previous page.

The existence of a demand during the period of prohibition meant that the reëstablished industry did not have to create a demand for its products over a long period of time. The existence of this demand was one of the factors which allowed a relatively great expansion of the whiskey industry in a comparatively short period of time following repeal. The problem of the industry immediately after repeal was the creation of a supply capable of satisfying the existing demand.

Not only did demand continue to exist during the era of prohibition, but also this demand was shaped and directed by the peculiar nature of consumption engendered by the illegality of the production and consumption of spirituous beverages during this period.

Previous to the passage of the 18th Amendment, drinking was a custom which was not extensively carried on in private homes.

Wines and cordials were consumed in relatively large quantities, but the consumption of whiskey was usually relegated to the saloon and the private club. Further, drinking in the presence of women was usually frowned upon, except for light wines and cordials. Moreover, the drinking of whiskey by women was not socially accepted. Whiskey was a man's drink not consumed in the presence of women.

The bar and the cocktail lounge, which have become an integral part of the post-prohibition culture, had not yet been established. The cocktail itself had not been invented. However, with the advent of the so-called "roaring twenties", American morals underwent a change. As part of this change in morals, the consumption of alcohol in the form of whiskey came to assume an air of respectability. It was no longer considered improper for a lady to drink or to be seen in a drinking establishment. It was during this period that the cocktail came into vogue. The probable reason for this invention was the fact that much of the whiskey produced during the prohibition era was of such a poor quality that it was necessary to dilute it to take the harshness out of the taste.(1)

It was during the period of prohibition that the consumption of whiskey in the home became a widespread custom. The probable reason for this change in cultural habits was the fact that the consumption of whiskey was illegal, and it was

(1) Hamilton, Walton and Associates, Price and Price Policies, (N. Y., McGraw-Hill Book Company), 1938, pp. 400-417.

much easier to drink at home than to take the chance of being caught in a speakeasy.

When the 18th Amendment was repealed, the American drinking public had a set of consumption habits which bore little relation to any previous habits. The cocktail was here to stay, and the speakeasy gave way to the cocktail lounge and the bar. To provide whiskey and other liquors for home consumption, the institution of the package store was devised.(2)

In order to meet this new type of demand, the distiller found it necessary to concern himself with the activities of a large number of wholesalers and retailers engaged in the function of distribution. In 1939, for example, there were 1,420 wholesale establishments(3) handling distilled spirits, and 19,136 package stores(4) handling distilled spirits as well as malt beverages.(5)

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(2) Ibid.
(3) Department of Commerce, Bureau of the Census; Census of Business (Washington, U. S. Government Printing Office), 1939, Vol. II "Wholesale Trade".
(4) Ibid., Vol. I "Retail Trade".
(5) In terms of selling cost to the distiller, this means that about 5.38 cents of every manufacturers sales dollar, including excise taxes in sales and costs, is devoted to the function of distribution. Excluding excise taxes from sales and costs, this figure becomes about 10.79 cents per dollar of sales.
Source: Federal Trade Commission Industrial Reports, Distilled Liquor Manufacturing Corporations (Washington, U. S. Government Printing Office), June, 1941, p. 17.

Many difficulties are encountered in attempting to analyze the demand situation in the post-prohibition period. The most important difficulties result from the smallness of the period of time in which it is possible to study variations in demand, and from the extenuating circumstances which have existed during this period. It is generally believed in the trade that demand is subject to changes brought about by fluctuations in the level of national income and in the tax structure.

The table below shows the average state excise taxes, the federal excise taxes, and the average total taxes for selected years.

Table #7

BASIC TAX RATE ON DISTILLED SPIRITS
(per tax gallon)

Year	Avg. State Tax	Federal Tax	Avg. Total Tax
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	0.98	[illegible]	[illegible]
1941	[illegible]	[illegible]	[illegible]
1942	[illegible]	6.00	[illegible]
[illegible]	[illegible]	6.00	[illegible]
[illegible]	1.05	[illegible]	7.05
1945	1.05	[illegible]	10.05
1946	[illegible]	[illegible]	10.25
1947	1.45	9.00	[illegible]

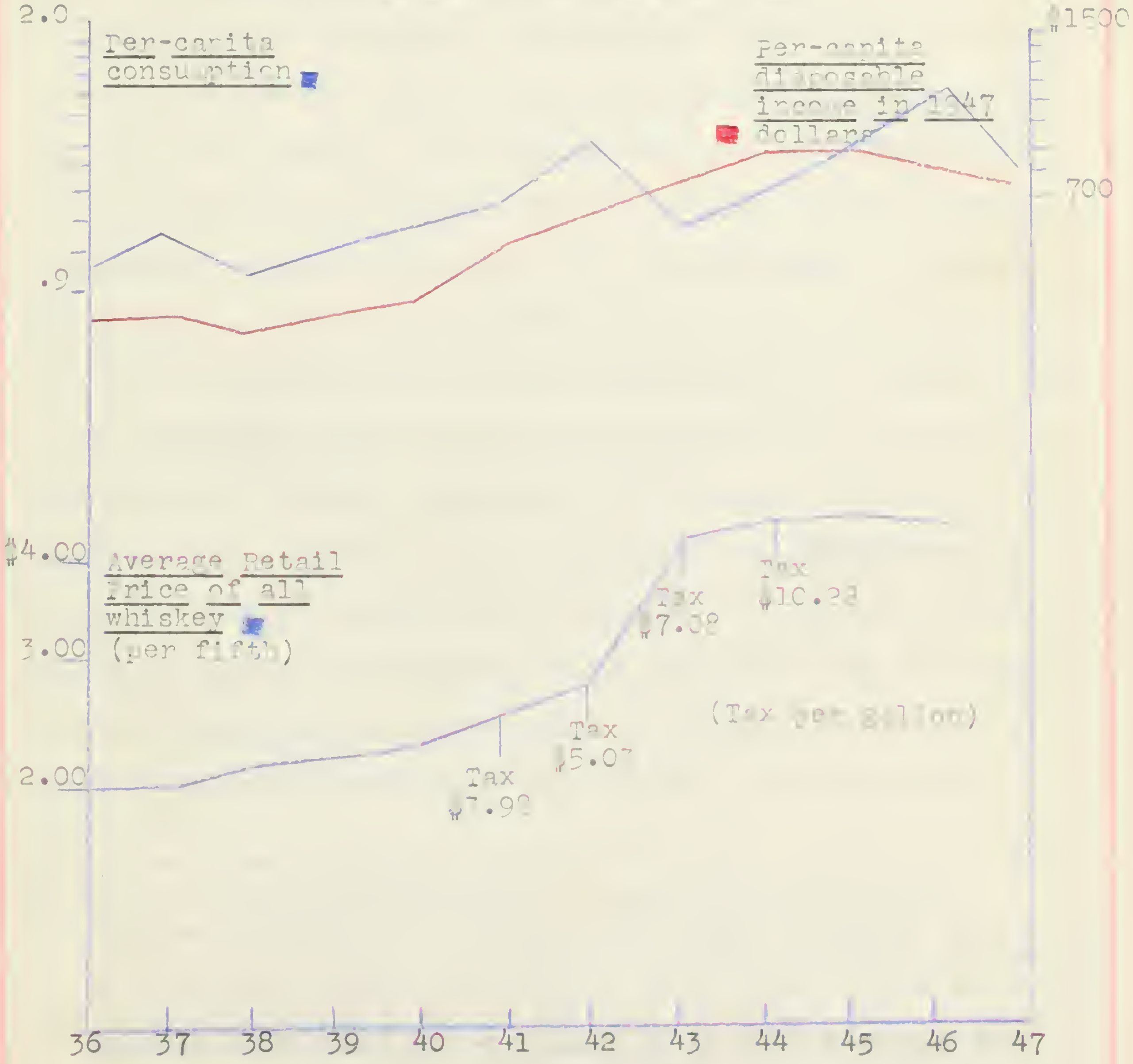
Source: Poor's Industry and Investment Service, "Brewing and Distilling Industry," [illegible]-4, (New York, Poor's Publishing Company), January 1, 1948.

The assumption that the demand for whiskey is related to income levels and the price level of whiskey is examined in the chart on the following page.

Chart 8

PER-CAPITA CONSUMPTION, PER-CAPITA DISPOSABLE INCOME, AND AVERAGE RETAIL PRICE OF ALL WHISKIES 1936-1947

(Plotted on semi-logarithmic scale)



Source: Prepared from material taken from the Economic Report of the President, Jan., 1948, Department of Commerce Release #47, and The Annual Report of the Distilled Spirits Institute, 1947.

The chart on the previous page is plotted on semi-logarithmic paper and indicates the rate of change in consumption, income and price. It may be seen that in the years from 1930 to 1942, per-capita consumption increased at about the same rate as the increase in disposable income and the increase in price. However, between 1942 and 1943, per-capita consumption declined sharply, even though per-capita disposable income continued to increase. It will be noted that this was accompanied by both price increases and decreases in supply, which resulted from the conversion of the productive facilities of the industry from whiskey production to industrial alcohol production. The chart on the following page indicates production of whiskey, withdrawals of whiskey, production of grain neutral spirits,(6) and total bottled output for all types of whiskey for the years 1934-1947. A sharp decline in all categories is evident during the years 1942 and 1943. In 1944 production increased again as distillers were given short holidays in which to produce grain neutral spirits.

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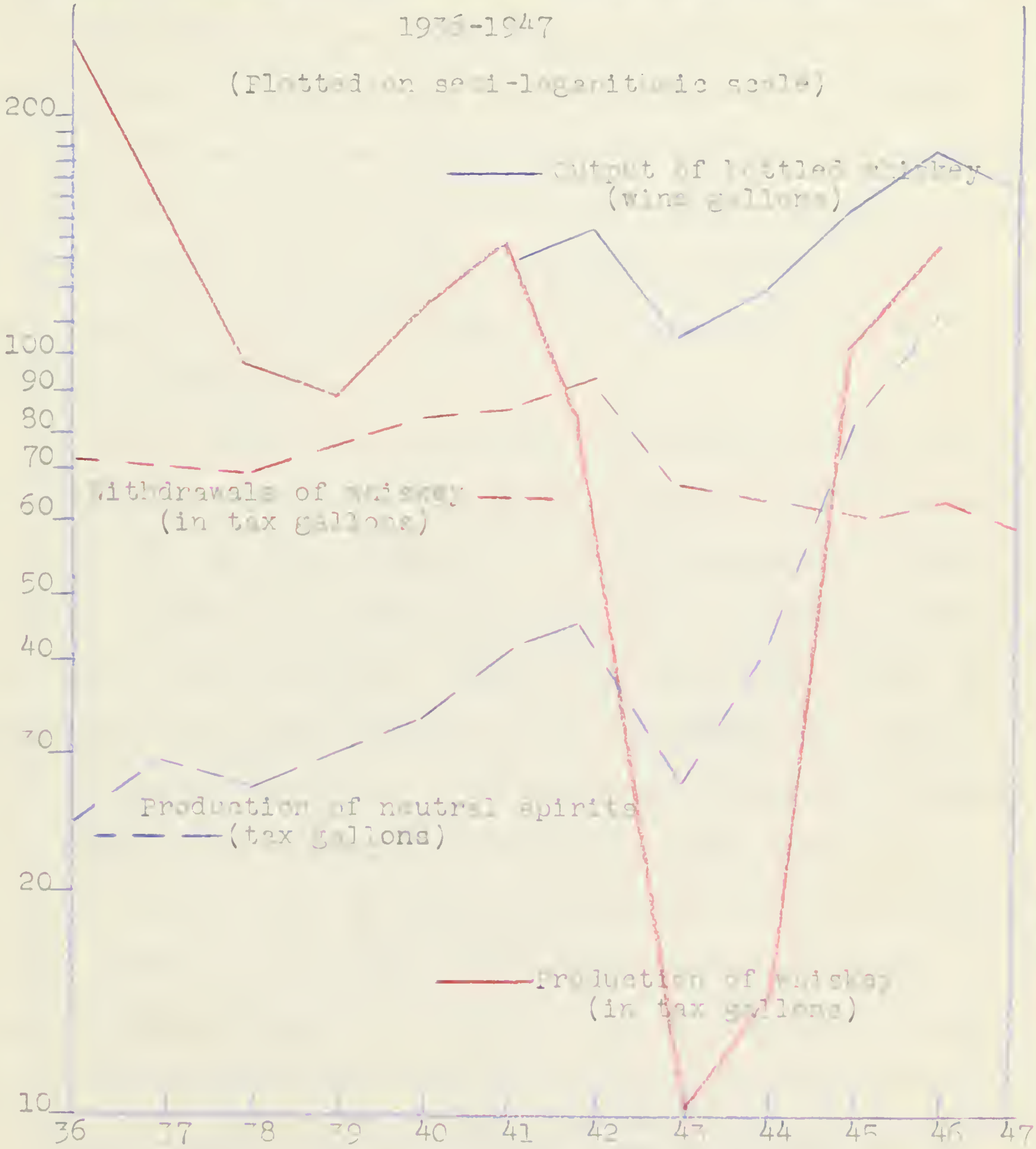
(6) Neutral Spirits-According to regulation definition, "Neutral spirits or alcohol are distilled spirits distilled from any material at or above 190 proof. During the period of unlimited national emergency proclaimed by the President on May 27, 1941, the term neutral spirits also included any spirits distilled at less than 190 proof which are so distilled or so treated in the process of distillation, or so refined by other processes after distillation, as to lack taste, aroma and other characteristics of whiskey, brandy, rum or other potable beverage spirits." These spirits are used for blending with straight whiskey.

Chart # 9

PRODUCTION OF WHISKEY, WITHDRAWALS OF WHISKEY, PRODUCTION OF GRAIN NEUTRAL SPIRITS, AND OUTPUT OF BOTTLED WHISKEY

1936-1947

(Plotted on semi-logaritimic scale)



Source: Prepared from data supplied by the Licensed Beverage Industries, Inc., the Distilled Spirits Institute, Inc., and the Alcohol Tax Unit.

In response to increased supplies of bottled whiskey, per-capita consumption increased at a rate about equal to the rate of price increases and faster than the rate of increase in per-capita disposable income, indicating a possible income elasticity effect at certain high levels of income.(7) Between 1946 and 1947 per-capita consumption declined at a rate greater than the rates of price decline and per-capita income decline. Possible reasons for this were consumer resistance to poor quality wartime whiskies(8) and price increases of more essential commodities.

It would appear that the level of income has more effect on per-capita consumption than price. However, price probably has an effect on the composition of consumption, if not upon the total amount of consumption. The factor of substitution is a difficult one to analyze. There are two possible types of substitution that must be taken into consideration. First, there is the possibility of substituting a low-priced whiskey for a high-priced whiskey in response to price increases or decreases in the level of disposable income. Because of the limited scope of this paper, this factor cannot be given adequate consideration. The second type of substitution may

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(7) By income elasticity is meant that as income increases the amounts spent for the commodity under consideration increase at a rate greater than the rate of increase in income.

(8) Many wartime whiskies were blends of straight whiskey and grain neutral spirits produced from such substances as distilled potatoes and vegetables.

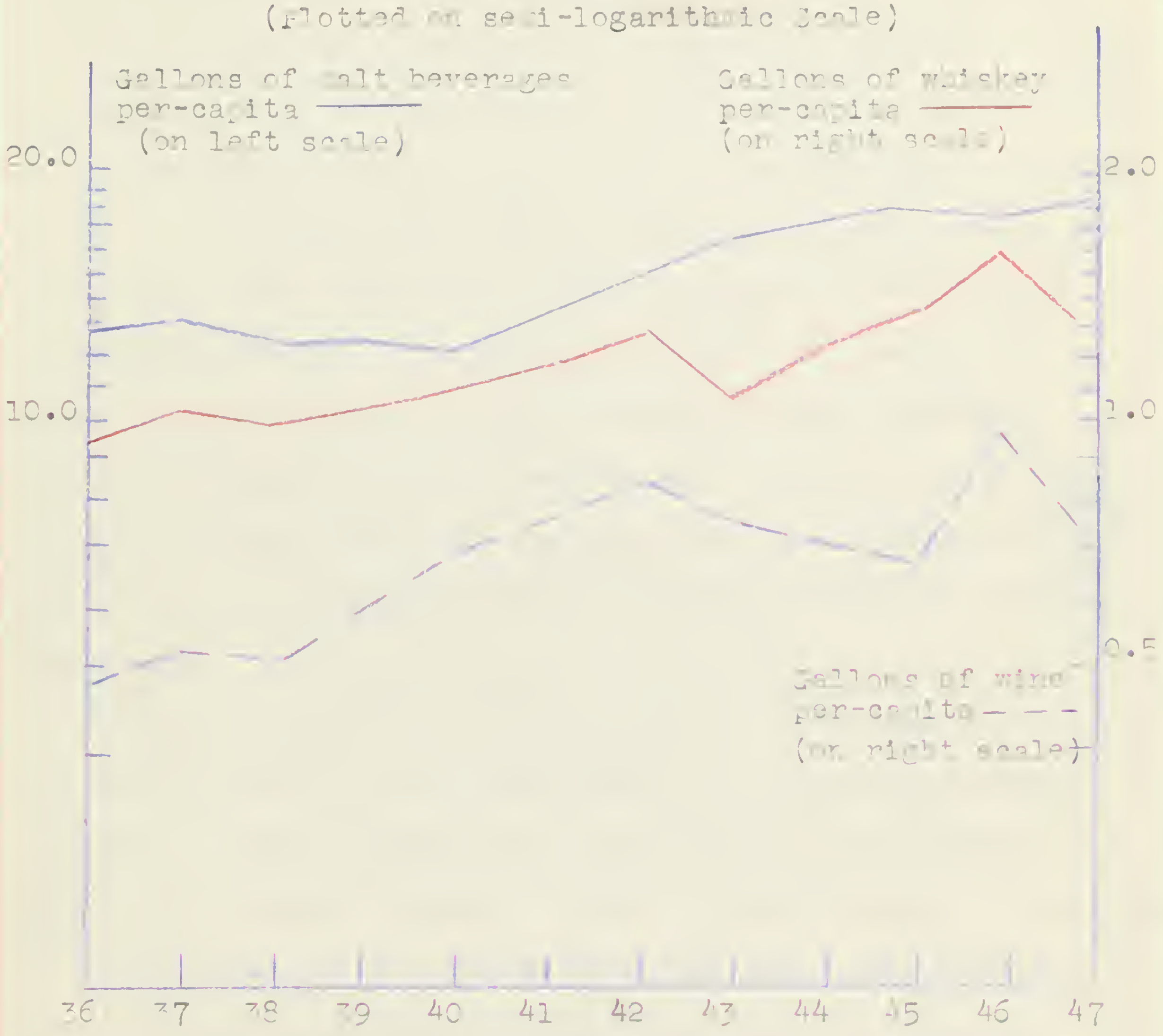
arise from a shift in consumption from whiskey to wines and beer in response to changes in per-capita disposable income and changes in price. The chart on the following page compares changes in consumption of whiskey, malt beverages, and wines. From this chart, it may be seen that per-capita consumption of whiskey declined in 1942 and 1943. The probable reason for this, as previously pointed out, was an increase in price and a decrease in supply. During this same period, however, it may be seen that the per-capita consumption of beer did not experience a decline, but continued to increase steadily. The consumption of wine appeared to suffer a decline comparable to the decline in the consumption of whiskey. Between 1943 and 1946 per-capita consumption of whiskey increased in response to increased supplies of whiskey. During this same period, per-capita consumption of wine continued to decrease and per-capita consumption of beer, while still increasing, was increasing at a decreasing rate. In 1945, per-capita consumption of beer began to decline. Whiskey and wine consumption both showed increases during this period. In 1946, per-capita consumption of whiskey and wine both decreased at a sharp rate, while per-capita consumption of beer once again increased. From shifts in demand during this brief period, it would appear that the demand for alcoholic beverages may be relatively inelastic in total, but the demand for individual beverages, such as wine, beer, whiskey, may be elastic to a certain degree.

Chart # 10

A COMPARISON OF PER-CAPITA CONSUMPTION OF MALT BEVERAGES, WHISKEY AND WINE

1936-1947

(Plotted on semi-logarithmic Scale)



Source: Prepared from material taken from the Distilled Spirits Institute Annual Report, 1947.

Foreign Penetration

As previously pointed out, upon repeal of the 18th Amendment, the available stocks of whiskey were meager and the productive facilities of the industry were limited. This presented an attractive temptation to foreign producers. It must be borne in mind that during the period when the United States was undergoing the great experiment of prohibition, the other areas of the world were not undergoing the same experience. This meant that, while the whiskey industry in the United States was dormant for a period of almost 15 years, such countries as Canada and England were not only producing whiskey and perfecting the techniques of distilling but were also maintaining personnel familiar with the problems of all phases of the distilling industry from production to distribution.

It may be said that the operations of foreign distillers set the pattern for the development of the American whiskey industry. They influenced the structure of the American industry in a number of ways. First, at the beginning of the era of repeal, foreign distillers held the only large supplies of aged whiskey. British Distillers Co., Ltd., for example, held over 100,000,000 gallons(9) of fully-aged scotch

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(9) Fortune Magazine, "Liquor in America: An Interim Audit," Vol. X, Number 4, October 1934, p. 99.

whiskey.(10) This meant that they would enjoy a virtual monopoly in the scotch whiskey market. Canadian corporations, such as Hiram Walker-Gooderham & Worts, Ltd. and Distillers Corp.-Seagrams Ltd., also held large amounts of aged whiskey. However, a heavy import duty of five dollars per tax gallon prevented these foreign whiskies from ever flooding the U. S. market.(11)

Nevertheless, considerable amounts of foreign whiskey have appeared on the American market. This is indicated by the following table, which shows the origin of the imports and their relation to the total amount of whiskey consumed in the U. S.

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(10) Scotch whiskey always refers only to whiskey produced in Scotland and manufactured in compliance with the laws of Great Britain. Any similar type of whiskey must include the word "type" and read "Scotch type whiskey." Scotch whiskey is made chiefly from barley. The production process is similar to that used in this country except that the malted barley is kiln dried over a peat fire. The peat smoke impregnates the barley and ultimately gives the scotch whiskey a smoky taste.

(11) Tax gallon refers to the unit of spirits subjected to the federal excise tax and import duty. (currently $5.00) A gallon of spirits of 100 proof would be subjected to a tax of $5.00, while a gallon of spirits of 110 proof would be subjected to a tax of $5.50. However, where the spirits are less than 100 proof, the tax is based upon the wine (physical) gallonage rather than the proof content. For the most part tax gallons and proof gallons are synonymous.

Table #11

IMPORTS OF FOREIGN WHISKEY---CONSUMPTION COMPARISONS

1934-1945

(in tax gallons)

Year	Total Whiskey Imported	Total Spirits Consumption Foreign and Domestic	Foreign Imports As a Percent of Total Consumption
1934	5,624,483	57,964,788	9.7%
1935	5,847,208	89,670,446	6.5%
1936	13,374,339	122,117,965	10.9%
1937	14,365,219	135,352,692	10.6%
1938	10,329,628	126,892,827	8.1%
1939	9,861,852	134,653,604	7.3%
1940	9,737,766	144,991,927	6.7%
1941	10,321,378	158,156,921	6.5%
1942	9,919,468	190,248,257	5.2%
1943	9,494,320	145,529,454	6.5%
1944	7,696,625	166,704,541	4.6%
1945	8,598,806	190,044,134	4.5%

Source: Prepared from data of the Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce, and the Distilled Spirits Institute, Inc.

The fact that the tariff prevented foreign distillers from importing whiskies into the U. S. in the quantities which they desired caused them to seek other methods of entering the U. S. whiskey market. Thus, the British Distillers Corp. Ltd. entered into an agreement with the National Distillers Products Corporation in the U. S. to erect jointly distilleries in the U. S. and share jointly the profits from the operation of these distilleries. The Canadian Corporation which operated as a subsidiary of the British Distillers Corporation Ltd.---Distillers Corp.-Seagram Ltd.---purchased the share of the company owned by the British corporation (DCL) and became independent. After separating itself from the DCL (Trade name for British Distillers Corp. Ltd.), Seagrams decided to jump the tariff barrier and establish distilleries in the U. S. The Canadian rival of the DCL and Seagrams, Hiram Walker, also decided that the only way to obtain a share of the American market was to operate distilleries in the U. S. The erection of large, modern distilleries took place throughout the U. S.

Not only did these British and Canadian corporations bring with them the necessary capital to erect modern, large distilleries, but they also brought with them the technical "know how" of all phases of the whiskey business.

The penetration of the American whiskey industry by Canadian and English producers introduced an important element into the American industry. As was pointed out in the first chapter, the product of the pre-prohibition distiller was of a

standardized nature. The raw whiskey produced by the various distilleries was homogeneous in character and sold on an organized market.

The foreign distiller did not produce a standardized product. The product of the foreign distiller was fully aged and blended bottled whiskey.(12) Product differentiation had long been an integral part of the whiskey business in such countries as Canada and Great Britain. The Canadian and British distillers were accustomed to marketing branded whiskies through well established retail and wholesale outlets. When these Canadian and English firms imported whiskey into the United States they imported bottled, aged whiskey and not whiskey in bulk. To market this product they established agreements with various jobbers in this country. Thus, a pattern of distribution was immediately established. When these Canadian and English corporations undertook distilling operations in the United States, they produced for this already established distributing system.

Marketing

In the era before prohibition most brands of whiskey were not marketed on a national scale. The number of brands that enjoyed a national market could be counted on the fingers of one hand. Not only were brands sold on local markets, but the importance of a brand name was at a minimum. This was occasioned by the transitory nature of the whiskey business.

(12) Fortune Magazine, "Distillers Co., Ltd.," Vol VIII, Number 5, November, 1933.

Producers were constantly entering and leaving the field of whiskey production. In addition, the package store in which the consumer has an opportunity to become familiar with the various brand names had not yet been established on any great scale.

However, largely as a result of the activities of those producers who received their originating impetus from foreign sources, the practices of product differentiation and individual marketing by the various firms were introduced in the American industry.

In order to successfully promote specific brand names, it became necessary for the distiller to enter into extensive advertising campaigns. The national marketing of brand names has caused the consumer to become conscious of the brand names of the whiskey which he purchases.

> "Buyers are fully aware that whiskies are improving in quality and insist upon an improved product. The label on the bottle is a guide to its contents. According to The Federal Alcohol Adminstration, consumers have shown a surprising disposition to scan labels before purchasing the ware. This has intensified the competitive character of the industry."(13)

The fact that marketing operations are an important element of the whiskey industry is illustrated by an examination of advertising costs in 1939 and 1940. In 1939,

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(13) Hamilton, Walton and Associates, Price and Price Policies, (N. Y., McGraw-Hill Book Company), 1938, p. 403.

4.79 cents of every sales dollar of the six largest corporations in the whiskey producing industry was charged off to advertising.(14) In 1940, a more representative figure is available. There are 17 firms included as a base for this figure. The 1940 figure uses corporations ranging from those having assets of less than $1,500,000, to those having assets of $34,624,000 to $92,531,000. The use of this larger sample indicates that in 1940, advertising costs amounted to 5.38 cents on the sales dollar, including Federal excise taxes in sales and costs, and 10.79 cents, excluding Federal excise taxes in sales and costs.(15)

Production

Product differentiation, brought about partly by the penetration of foreign distillers, has had a direct effect upon the development of the post-prohibition industry. Similarly, the practice of direct selling to wholesalers and retailers by the producer, brought about by a change in consumption patterns as well as the activities of Canadian and British firms, has made itself felt upon the organization of the reestablished industry.

Production is one of the elements of the industry upon which these two factors have made themselves felt. The pre-

(14) Federal Trade Commission Industrial Reports, op. cit., June, 1941, p. 16.
(15) Ibid., September, 1942, p. 11.

prohibition distiller was concerned merely with producing alcohol. He was not concerned with the processes of ageing or distribution. As soon as the whiskey was produced, it was immediately marketed, either for cash or for warehouse receipts. This fact was one of the primary reasons for the failure of the various combination movements in the early era. Because the early manufacturer was concerned only with manufacturing, distilling could be carried on with a relatively small capital investment. This allowed the establishment of new distilleries in response to favorable changes in price. In addition, the sale of the product of a distiller who entered the market in response to price increases was easily accomplished through the centralized exchange in Peoria.

To provide the product for exclusive brand promotion the post-prohibition distiller has undertaken many production operations which were performed by a large number of small middlemen in the pre-prohibition era. The post-prohibition distiller produces the raw whiskey, ages it, blends it, and distributes it. The assumption of these functions by the distiller has meant that the industry has become integrated to a degree far greater than existed in the early era. The pre-prohibition distiller did not have to worry about the processes of ageing and storing and inventory accumulation. This function was carried on by a large number of small middlemen. Ageing and storing, however, constitute a large portion of the expense incurred by the post-prohibition distiller.

"Ageing means the storage, after distillation and before bottling, in oak containers. In the case of American type whiskies produced on or after July 1, 1936, other than corn whiskey, it means storage in charred, new oak containers. Corn whiskey need not be aged in charred barrels. (However, when corn whiskey has been treated with charred chips or stored in charred oak barrels, it becomes bourbon whiskey.) The period of ageing in Government bonded warehouses in this country is limited to eight years, at the end of which time whiskey must be tax paid and withdrawn from the warehouse."(16)

The following table shows the value of cooperage used by whiskey distillers.

TABLE #12

COOPERAGE USED BY WHISKEY DISTILLERS 1933-1945, AND VALUE OF PRODUCTS

Year	Number of Barrels	Approx. Value $
1933	239,717	1,445,815
1934	1,515,017	8,207,386
1935	2,708,836	14,491,351
1936	3,999,404	21,615,850
1937	2,858,328	15,558,933
1938	1,809,983	9,551,997
1939	1,711,013	6,680,177
1940	2,203,344	11,788,819
1941	2,688,087	10,763,071
1942	1,424,576	11,[illegible],159
1943	296,071	2,525,079
1944	543,551	5,196,028
1945	972,756	10,616,054

Source: Prepared from data supplied by The Associated Cooperage Industries of America, Inc.

(16) Beverage Distilling Industry, Facts and Figures 1934-1935, p. 7.

Not only is it necessary to purchase specially constructed barrels in which to age raw whiskey, but it is also necessary to construct and maintain warehouses in which to store the barrels of ageing whiskey.

The importance of the accumulation of stocks by the distiller is indicated by the table on the following page which indicates the inventories held in bonded warehouses for the period 1933-1934.

Table # 13

U. S. WHISKEY INVENTORIES---BEFORE AND AFTER EVAPORATION AND LEAKAGE LOSSES

(In U. S. Government Bonded Warehouses)
(in tax gallons)

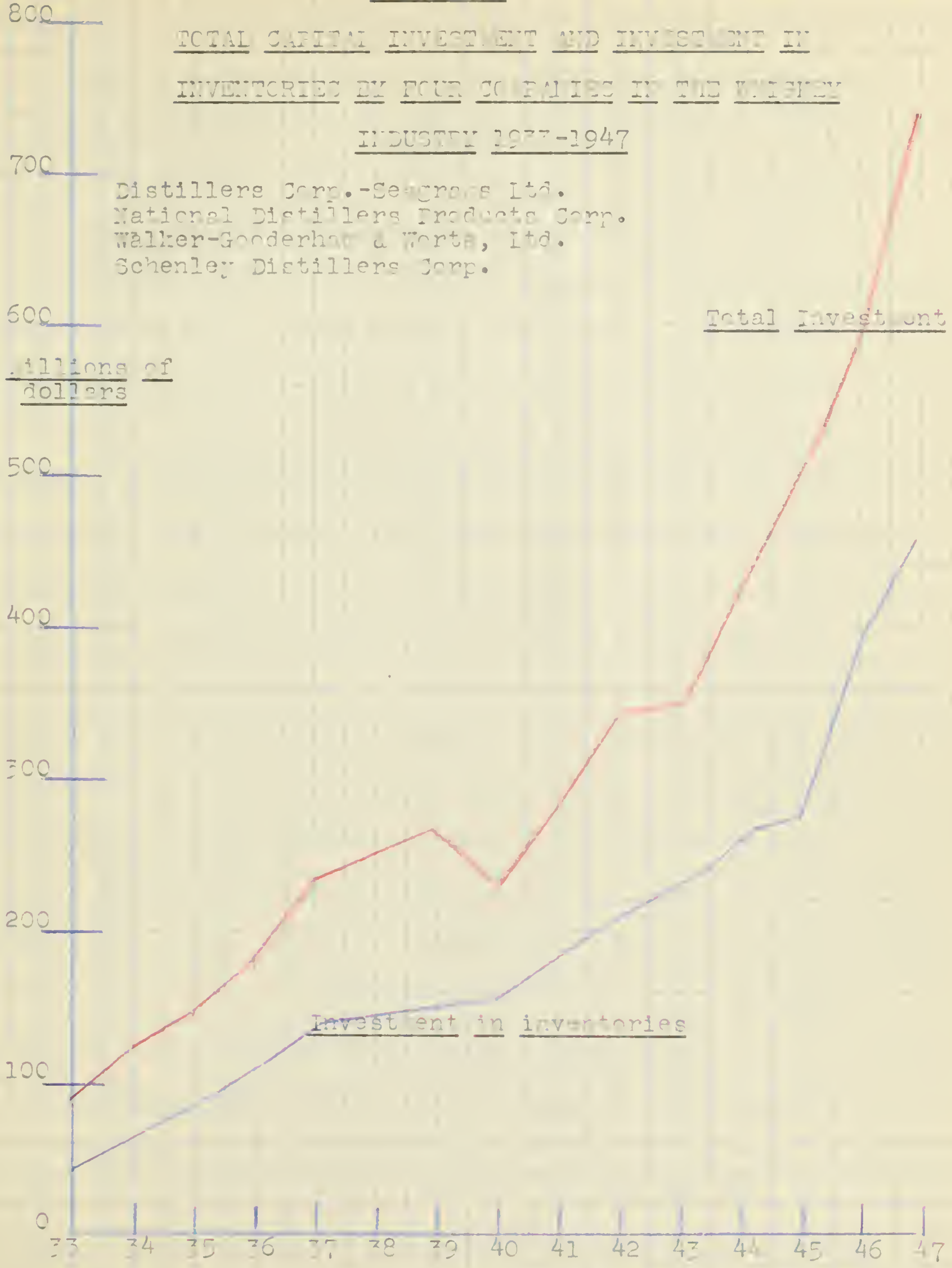
	End of month	Orig. entry guage before losses	Est. evap. and leakage losses	Estimated net-after losses	% loss of original entry guage
1934	June	57,717,662	5,292,662	52,425,000	9.2
	December	91,629,512	7,829,512	83,800,000	8.5
1935	June	152,807,215	13,257,215	139,550,000	8.7
	December	207,137,540	17,012,540	190,125,000	8.2
1936	June	300,658,508	27,983,508	272,675,000	9.3
	December	374,467,136	37,142,136	337,325,000	9.9
1937	June	445,285,661	48,560,661	396,725,000	10.9
	December	452,702,957	55,477,957	397,225,000	12.2
1938	June	471,159,529	64,184,529	406,975,000	13.6
	December	466,784,731	68,684,731	398,100,000	14.7
1939	June	478,889,618	74,889,618	404,000,000	15.6
	December	465,024,711	77,149,711	387,875,000	16.6
1940	June	480,937,609	80,362,609	400,575,000	16.7
	December	479,102,210	82,202,210	396,900,000	17.2
1941	June	504,080,691	85,430,691	418,650,000	16.9
	December	510,930,550	87,130,550	423,800,000	17.1
1942	June	516,918,587	88,243,587	428,675,000	17.1
	December	469,334,271	81,859,271	387,475,000	17.4
1943	June	424,824,966	79,499,966	345,325,000	18.7
	December	385,379,751	76,679,751	308,700,000	19.9
1944	June	348,646,381	74,171,381	274,475,000	21.3
	December	317,412,794	69,037,794	248,375,000	21.8
1945	June	307,587,545	66,787,545	240,800,000	21.7
	December	341,235,256	64,810,256	276,425,000	19.0

Source: Prepared from data of the Alcohol Tax Unit, Bureau of Internal Revenue, Treasury Department.

Another indication of the importance of accumulated stocks is shown by the chart on the following page. The chart compares investment in inventories with total investment by the four leading producers in the whiskey industry during the years 1933-1947. It can be seen from this chart that a large portion of the total investment of the four dominant firms is in inventories.

Chart #14

TOTAL CAPITAL INVESTMENT AND INVESTMENT IN INVENTORIES BY FOUR COMPANIES IN THE WHISKEY INDUSTRY 1933-1947



Source: Standard and Poor's Industrial Surveys, Brewing and Distilling, B4-B, Section 2, April 2, 1948.

A factor which makes the storage and inventory process relatively expensive is the element of evaporation. At any given time the age composition of whiskey or other spirits in Government-bonded warehouses will range anywhere from one month to eight years, and a hundred gallons of whiskey which were deposited for ageing eight years ago and still remain untouched are currently shown as a hundred gallons original entry gauge---actually there are only about 64 gallons remaining. Approximately 36 gallons have been lost through evaporation and leakage during the eight year ageing period. (The Federal excise tax is not paid until the spirits are withdrawn from the warehouse, and in this instance the distiller would pay the tax on the 64 gallons remaining---not the hundred gallons originally stored. However, the 36 gallon loss here referred to is the maximum loss allowed; if 40 gallons have been lost, the distiller would still have to pay a Federal excise tax on 64 gallons---four gallons of which would be non-existent.) The table showing accumulation of inventories during the period 1934-1947 also shows the losses through evaporation and leakage during this same period.

Reference to the table on inventories shows the substantial differences between the original entry guage figures on whiskey inventory reported by the Alcohol Tax Unit and the estimated amount actually outstanding as of the end of June and December of each year from 1934 through the end of 1945. The volume of whiskey actually remaining in U. S. Government

warehouses at the end of 1945, for example, was 19% lower than the original entry guage amount which the Government reported for the same date. (This 19% loss also indicates the approximate average age of the remaining whiskey. A 19% evaporation and leakage loss would indicate that the average age of the whiskey in Government warehouses was about 3½ years.) The widening in losses which occurred between 1934 and 1945 was the result of the increase in average age of the whiskies, which resulted from the unusually large production of whiskey in 1936-1937 and the increasing age of the whiskey still on hand from these years.

These factors of ageing and storing add up to a considerably changed method of production for the modern distiller. It is a necessary pre-requisite of the whiskey industry to have possession of substantial inventories of aged whiskey. Large stocks of whiskey in the process of ageing must be maintained by the modern distiller, if he is to have a product to market.

Government Regulation

During the era of prohibition much of the whiskey produced was of inferior quality. This was caused by the crude methods of production such as is used in the manufacture of alcoholic beverages. Efficient production procedures could not be undertaken because of the illegality of the manufacture of whiskey. The raw whiskey could not be properly aged or blended. This factor was, in part, responsible for stringent government regulation of production in the post-prohibition era.

Another reason for government regulation of certain phases of the industry in the post-prohibition era stems from the type of individuals employed in the production and distribution of alcoholic beverages in the prohibition era. The Federal government desired to prevent the entry of these individuals into the post-prohibition industry.

To carry out these objectives, Federal Government intervention in the post-prohibition industry has assumed two forms. First, the Federal government has intervened to maintain minimum standards of production by setting up and enforcing standards of production, aging, and blending. Second, the Federal government, through its licensing power, attempts to prevent "undesirables" from entering the industry.

In 1933 the Federal government took upon itself the supervision of the alcoholic beverage industry through the Federal Alcohol Administration set up under executive order pursuant to the NIRA. After the NIRA was invalidated, the FAA was reëstablished by the Act of Congress of August 29, 1935. The policy of the Administration has been to promote minimum standards in the industry for the protection of the consumer and the legitimate producer. The Administration is responsible for the establishment of minimum definitions which must be used in the production of whiskey. They are as follows:(17)

1. Straight rye
   Not less than 51% rye grain used in manufacture (usually 60% rye, 30% corn, 10% malt)

2. Straight Bourbon
   Not less than 51% corn grain used in manufacture (usually 2/3 corn and 1/3 rye)

3. Blended whiskey
   Not less than 20% straight whiskey of 100 proof and separately, or in combination, whiskey or grain neutral spirits

4. Blended rye, corn, or bourbon
   Not less than 51% of the straight whose name gives it its generic name

5. Blended straight rye, corn, or bourbon whiskies
   A mixture of several whiskies of the same type

6. Spirit whiskey
   At least 5% and not more than 20% of whiskey in combination with neutral spirits

7. Bonded whiskey
   Stored under government bond for at least four years

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(17) Hamilton, Walton & Associates, op. cit., p. [illegible].

In addition to minimum standards of production, the Administration is responsible for labeling and advertising under definite standards prescribed by the Act.

The Act was amended in June 1936, by the addition of a further title which abolished the Federal Alcohol Administration as a division of the Treasury Department and established an independent three-man board. The FAA is a relatively small organization with a total personnel in the neighborhood of about 165.

Not only is the Administration concerned with minimum standards of production and advertising, but it is also responsible for preventing "undesirables" from entering the industry. Permits are required from the FAA to enter any phase of the industry which is interstate in nature. The Administrator is authorized to issue permits to engage in the business of importing distilled spirits, wines or malt beverages; rectifying or blending distilled spirits, or producing wine; and wholesaling distilled spirits, wine or malt beverages.(18)

Another use of the licensing fee other than to prevent the entrance of "undesirables" into the alcoholic beverage industry may be seen in the use of the licensing device by State governments to stimulate local beverage production which utilizes raw materials produced in the particular State.(19)

(18) Hearings Before the Temporary National Economic Committee, Part 6, The Liquor Industry (Washington, U. S. Government Printing Office), 1939, p. 2420.

(19) For example, Alabama taxes manufacturers of alcoholic beverages $1,000 annually for each place of manufacture,

(continued on next page)

(19) Continued

but wine makers using 75% of Alabama raw materials in their wineries pay $25 for each place of manufacture. The "liquor monopoly" states are in a particularly advantageous position to favor local agricultural products. The Maine law provides that in purchasing liquor, the state commission must give priority to those beverages made from Maine products. The Ohio liquor control board is empowered to fix prices so that its profits do not exceed [illegible]0% of the sales price, but as to liquor made from Ohio fruits, the profit may not exceed 10%. Other states stimulate local agricultural production by requiring their use in liquor manufacture. Minnesota, Iowa, North Dakota, and Oregon secure a market for their for their barley by providing that malt beverages sold in the state must contain 66 2/3% barley malt.

Another method of encouraging the local liquor industry consists in tax exemptions or taxation at lower rates on alcoholic beverages produced for export to another state. Such statutes give the brewer or distiller in the exempting state an advantage over competitors in other states who receive no such exemption. At least 2[illegible] states grant such exemptions to home producers. Georgia and New Jersey, however, burden exports by levying additional taxes or higher license fees for exporting-wholesalers than for importing-wholesalers selling solely in the state. The Pennsylvania provision is especially interesting. It provides that the excise tax on imports be refunded in an amount equal to the tax levied by the state of destination on imports from Pennsylvania, if such state is in substantial competition with the state of Pennsylvania. This illustrates how the power of taxation is employed for the purpose of equalizing competition.

While encouraging exports, the states discourage imports. No less than [illegible]0 states have enacted direct or indirect import restrictions. Three states discriminate against incoming beverages directly by taxing them at a (continued on next page)

(19) continued

higher rate than local beverages. Georgia for example, levies a tax of five cents a gallon on domestic wine containing not more than 14% alcohol, but foreign wines of the same alcoholic content must pay 40%.

But it is more common to impose restrictions on the importer, than on the imports itself. At least six states charge a higher additional fee for importing into the state than is charged for wholesaling or distributing the local product. In Washington the wholesalers annual license fee for domestic wine is $50, but the importer must pay $250. Massachusetts charges solicitors for foreign beverages a $100 to $300 annual license fee, as against $10 for those soliciting the local product. At least six states provide that importers or importing distributors must have resided in the state for a specified period of time. Similarly, corporations may be allowed to import only if a given number of their directors are citizens of the importing state. At times beverage importers and dealers are required to maintain a place of business in the state or are discriminated against for failure to do so. For example, Louisiana requires that dealers maintaining a regularly established place of business in the state pay only a $1000 annual fee, but failure to maintain such a place of business subjects the dealer to a $10,000 fee.

Other factors are the discriminatory and retaliatory legislation and several port of entry statutes. Nine states provide for embargoes or retaliatory taxes directed against states discriminating against their alcoholic products. In some cases the legislation is mandatory, while in others the state agency is entrusted with the power of imposing the retaliatory provisions. In 1939, Missouri repealed its retaliatory law and Indiana abolished its so called port of entry law and enacted a new measure containing reciprical and retaliatory features. Kansas and California have port of entry laws similar to those found in the motor vehicle field, but while the Kansas law is mandatory, the California law empowers the Board of Equalization to put it into effect, if it is thought necessary.

Source: Public Revenue from Alcoholic Beverages 1946 (Washington, Distilled Spirits Institute, Inc.), 1947.

One of the most important types of government regulation with respect to maintaining minimum standards in the alcoholic beverage industry is that type which has as its object the elimination of fraudulent advertising. The Federal Alcohol Administration has jurisdiction over such matters as labeling and advertising. However, in general practice such matters are handled by the Federal Trade Commission. A review of the activities of the Federal Trade Commission with respect to the liquor industry indicates that complaints have been of three types. The first type may be generally classified as cease and desist orders against rectifiers falsely claiming to be engaged in the process of distilling.

> "In the course and conduct of its business as aforesaid, by the use of the word "Distilleries" in its corporate name, printed on its stationery, catalogs, advertising and labels attached to the bottles in which it sold and shipped its said products, and in various other ways, respondent represented to its customers and furnished them with means of representing to their vendees, both retailers and the ultimate consuming public, that it was a distiller and that the said whiskies, gins and other spirituous liquors therein contained were by it manufactured through the process of distillation from mash, wort or wash, when, as a matter of fact, respondent is not now and never was a distiller, does not now and never did distill the said whiskies, gins and other spirituous liquors by it so bottled, labelled, sold and transported. Respondent does not now, and never did own, operate or control any place or places where spirituous liquors are manufactured by a

process of original and continuous distillation from mash, wort or wash."[20]

The following is a list of firms to which cease and desist orders have been issued on the grounds of mislabeling and false advertising.[21]

Table # 15

CASES AND DECISIONS AGAINST THE LIQUOR INDUSTRY

BY THE FEDERAL TRADE COMMISSION

Advertising business status falsely--rectifiers claiming to be distillers.

United Distilling Co.	1936
Morgan Distilling Corp.	1936
Esbeco Distilling Corp.	1936
Potomac Distilling Corp.	1936
Old Colony Distillery Inc.	1936
Distiller's Exchange, Inc.	1936
Mauer Distilling Co.	1936
C. G. Taylor Distributing Co.	1936
Irish Hills Distilleries Inc.	1936
Ambur Distilleries Inc.	1936
Valley Springs Distillery Inc.	1936
Arrow Distilleries Inc.	1936
Consolidated Distillers Corp.	1937
Rosecrest Distillers	1937
Federal Distillers Corp.	1937
Imperial Distillers Corp.	1937
Ostrucon Distillers Products Co.	1937
Reo Distillers, Inc.	1937
Hercules Products and Distilling Co.	1937
Paramount Distillers, Inc.	1937

Misbranding or mislabeling

Fed. Distilled Products	1936
United Distilling Co.	1936
Grove Distillers and Wine Co. Inc.	1936
Cantonsville Distilling and Dist. Co.	1936

(20) Report of the Regular Session of the Federal Trade Commission, August 28, 1936, Docket #2471.

(21) Digest of Decisions of the Federal Trade Commission 1915-June 1, 1938 (Washington Printing Office), 1940.

Morgan Distilling Corp.	1936
Potomac Distilling Corp.	1936
Old Colony Distillery, Inc.	1936
General Distillers Ltd.	1936
Distillers Exchange, Inc.	1936
Jonas Schainwald & Son, Inc.	1936
Western American Distillers Corp.	1936
Mauer Distilling Co.	1936
Colonial Distilling and Dist. Corp.	1936
Campbell's Distillery Inc.	1936
Acme Distilleries, Inc.	1936
Dominion Distilleries, Inc.	1936
Chesapeake Distilling and Dist. Co.	1936
Interstate Distillers, Inc.	1936
J. C. Taylor Distributing Co.	1936
Columbia Distilling Co.	1936
Irish Hills Distilleries, Inc.	1936
Arbur Distilleries, Inc.	1936
Gold Seal Distillers, Inc.	1936
Valley Spring Distillery, Inc.	1936

The Second type of FTC action may be said to result from the Miller-Tydings Act of 1937, which makes lawful contracts or agreements prescribing minimum prices for resale of commodities sold and shipped in interstate commerce, if such agreements are lawful in the state in which the merchandise is to be resold. However, the Act does not apply to the District of Columbia. Hence, the FTC has seen fit to issue cease and desist orders to those distillers and wholesalers attempting to maintain resale price agreements in the District of Columbia. Such orders have been issued against Seagram, Schenley, National, and Hiram-Walker, as well as several small distillers. In addition orders have been issued by the commission to a number of wholesale outlets. (22)

(22) Reports of the Regular Sessions of the Federal Trade Commission, June10, 1938 to Feb. 29, 1940, Dockets #2909, 2949, 2988, 2989, 2990, 2991, 2992.

A third type of order issued by the FTC refers to Section 7 of the Clayton Act which prohibits a corporation from acquiring capital stock in a competing corporation. Such a case was brought against the Schenley Corporation for acquiring a part capital stock of the Bernheim Distilling Corporation of Louisville, Ky.[23] This is the only case of this nature involving the whiskey industry.

Profits

The repeal of the 18th Amendment created a fertile area for profitable investment. There existed a relatively well established demand with very little supply to meet this demand. Those companies in possession of stocks of aged whiskey or productive facilities were in a position to earn substantial profits.

In 1934, four companies--Seagram, National, Schenley, and Hiram Walker--owned 71% of the stocks of whiskey in existence and controlled 60% of the productive facilities of the industry.[24] In this same year these companies earned a return on their invested capital of 29%, 20.1%, 46.2% and 10.1% respectively. These high rates of return attracted new firms into the whiskey business. The following table indicates the number of firms producing whiskey during the period 1933-1939.

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(23) Digest of Decisions of the Federal Trade Commission, 1915-June, 1938 (Washington, U. S. Government Printing Office), 1940.

(24) Hearings Before the Temporary National Economic Committee, Part 6, The Liquor Industry (Washington, U. S. Government Printing Office), 1939.

Table # 16

NUMBER OF WHISKEY DISTILLERIES OPERATED

	1934	1935	1936	1937	1938	1939
Independent Distilleries	74	100	118	129	97	110
Owned by four companies	16	13	18	20	20	25

Four companies: Schenley Distillers Corp.
National Distillers Products Corp.
Joseph E. Seagrams & Sons, Inc.
Hiram Walker & Sons, Inc.

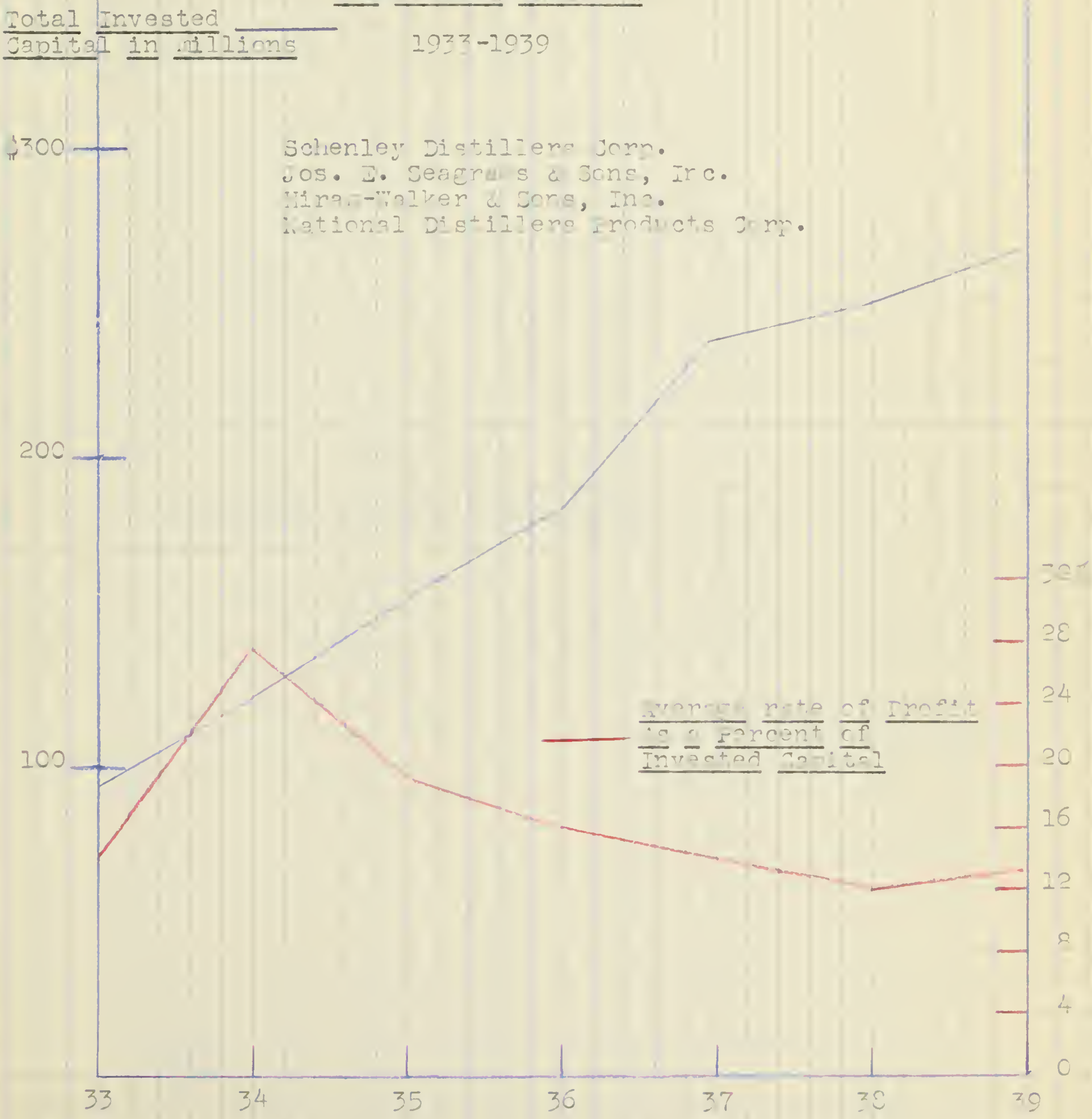
Source: Hearings before the TNEC, Part 6, Liquor Industry, (Washington, U. S. Government Printing Office), 1939, p. 2678.

A steady increase in the number of firms may be detected between 1934 and 1939. The exception to this trend appears in 1938 which was generally a poor business year.

Not only did the number of firms increase during this period because of the favorable profit outlook, but also those companies originally dominating the market continued to expand at a rapid rate. This is indicated by the following chart which shows profits (as a percent return on invested capital), and capital investment. (The position of those firms which are in a dominant position in the industry will be discussed in the chapter that follows.)

Chart # 17

TOTAL CAPITAL INVESTMENT AND AVERAGE RATE OF PROFIT AS A PERCENT OF INVESTED CAPITAL FOR FOUR COMPANIES IN THE WHISKEY INDUSTRY



Source: Standard and Poor's Industrial Surveys, Brewing and Distilling, # B-4, Sept. 6, 1940.

CHAPTER III

THE POST-PROHIBITION INDUSTRY

THE POST-PROHIBITION INDUSTRY

It has been shown that certain influences of importance to the whiskey industry have arisen out of the era of prohibition. These influences have made themselves felt on the structure of the whiskey industry during the period following prohibition. The objective of this chapter will be to show how these influences have affected the post-prohibition whiskey industry. To accomplish this objective, the structure of the post-prohibition industry will be examined and analyzed. Next, the factors arising from the prohibition era will be related to the present structure of the industry.

Economic Concentration

The whiskey industry today is concentrated in the hands of four large distillers:

Joseph E. Seagram's & Sons, Inc.
Hiram Walker & Sons, Inc.
Schenley Distillers Corporation
National Distillers Products Corporation

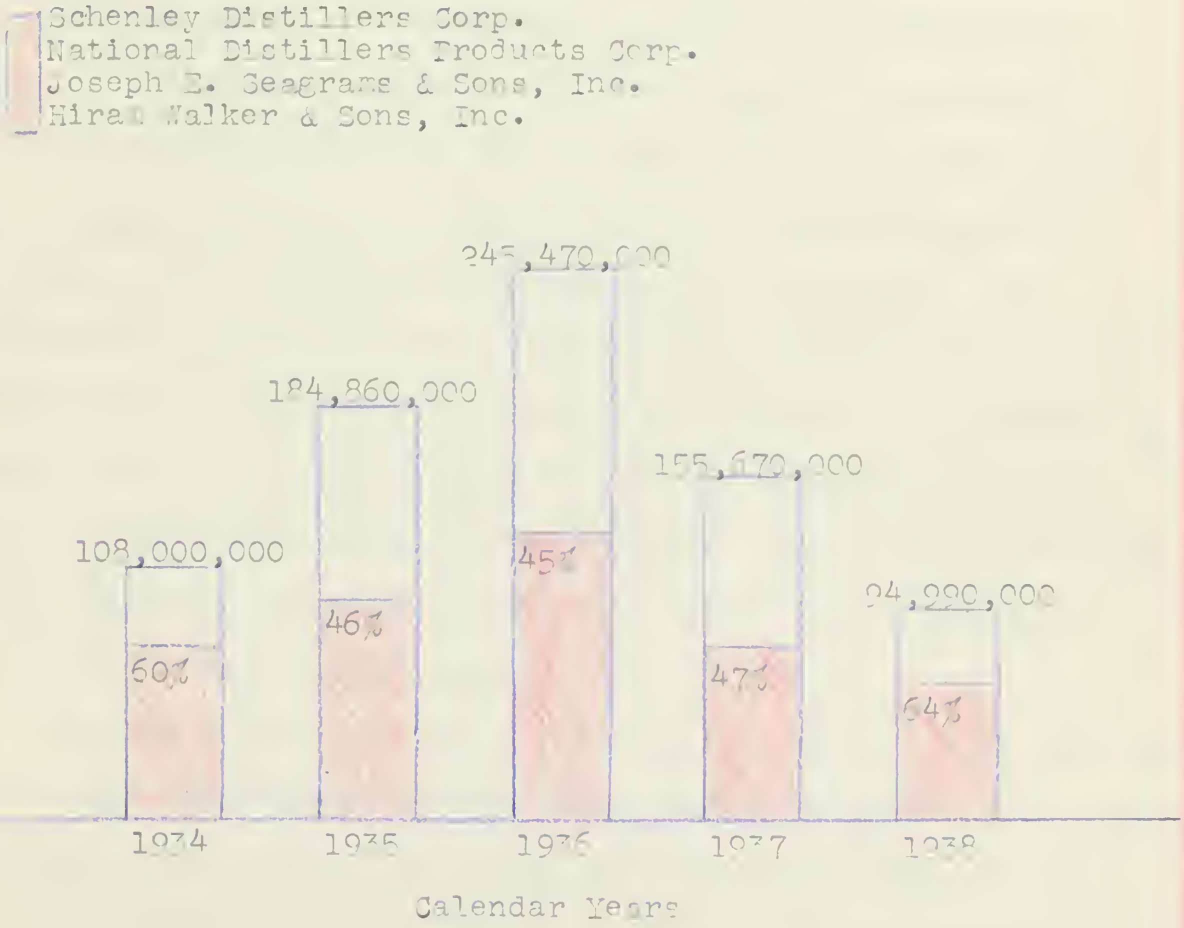
1. Production

A clear indication of the extent to which the Axis (the trade name given to the afore-mentioned four companies) dominates the industry can be seen from an examination of the production of this group as compared with the production of the industry as a whole. This comparison is made in the chart on the following page.

Chart #18

PRODUCTION OF WHISKEY IN THE UNITED STATES BY FOUR COMPANIES COMPARED WITH TOTAL PRODUCTION

(Tax Gallons)



Source: Hearings Before the Temporary National Economic Committee, Part 6, Liquor Industry (Washington, U. S. Government Printing Office), 1939, p. 2679.

Another factor which strengthens the economic position of the Axis in the industry arises from economies of production which they are able to achieve.

These economies are in the nature of lowered unit costs stemming from the operation of the Axis distilleries at a point nearer capacity production than those operated by their independent rivals. In contrast to the independent distilleries, the distilleries of the Big 4 are operated in a continuous manner. Independent distilleries are frequently operated on a part-time schedule.(1) The Axis firms, because of their control over large amounts of capital, are able to make substantial inventory commitments three to six years in advance. The independent distiller often lacks the resources to make possible large-scale production for inventories. Constant accumulation of large stocks by the Axis firms allows the distilleries of the Big 4 to operate on a full-time schedule. This continuous production schedule probably results in a considerably reduced unit cost for the Axis plants.

Doubtless the Axis firms are able to achieve other economies as a result of their large size and integrated operations. Such economies would be in the nature of lowered distribution costs due to integration between the distiller and the wholesaler, and lowered costs of certain raw materials--bottles, barrels, and other containers--because of volume purchases. In addition, the Axis firms may benefit from economies in transportation costs arising out of the geographical dispersion of distilleries and bottling plants.

(1) Hearings before the TNEC, _op. cit._, p. 2560.

2. Inventories

Inventories, because of the peculiar nature of the whiskey industry, are as important a factor as production in determining the economic position of the Big Four in the industry. An indication of the concentration of the industry in the hands of the Axis is shown by a comparison of total stocks of whiskey held in government warehouses[2] by the entire industry with the stocks of whiskey held in government warehouses by the firms of the Axis. The chart which follows indicates the inventory position of the Big Four and the entire industry for the periods 1933-1938.

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(2) U. S. GOVERNMENT (INTERNAL REVENUE) BONDED WAREHOUSE-Distilled spirits (except for cordials and liqueurs and sometimes gin) are stored in U. S. Government bonded warehouses following production---usually for ageing. The excise tax is not payable until they are withdrawn, except for bottled-in-bond spirits. Distilled spirits are usually stored in barrels approximating 50 gallons each, although neutral spirits may also be stored in tanks or steel drums. The warehouses are set up under the laws and regulations of the Bureau of Internal Revenue. Although the proprietor of a bonded warehouse is a private individual or firm, the operations as well as the warehouse itself are kept under the direct supervision of officers of the Bureau of Internal Revenue, who carry the keys to the warehouse, keep a government record of all entries and withdrawals of spirits, etc. The warehouse owner may enter the premises only in the presence of a government officer. No spirits may be withdrawn except with government permission.

CHART #19

STOCKS OF WHISKEY IN BONDED WAREHOUSES HELD BY

FOUR COMPANIES COMPARED TO TOTAL STOCKS

Tax Gallons

Source: Hearings before TNEC, *op. cit.*, p. 2080.

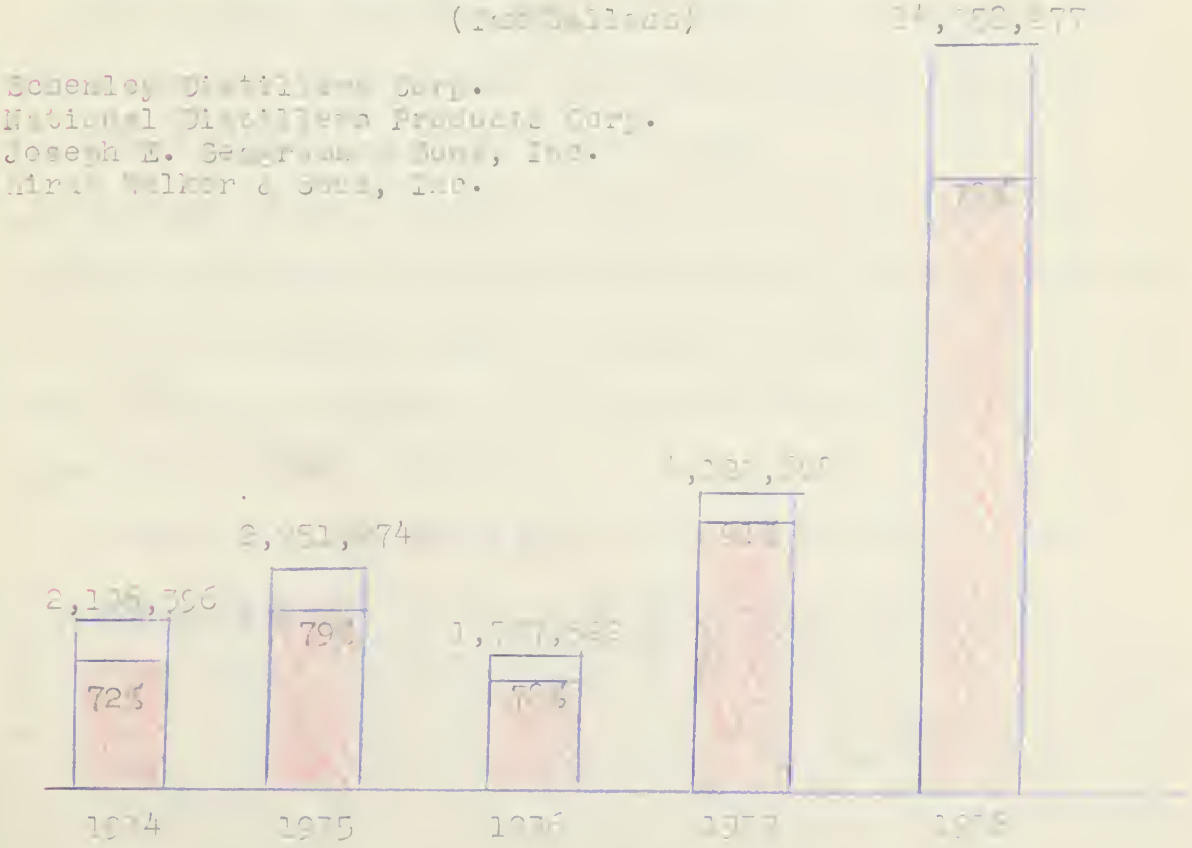
An even more accurate indication of the activities of the Axis than is shown by a simple comparison of the stocks of whiskey held by the Big Four with the stocks held by the entire industry is given by a comparison of the stocks of whiskey FOUR years old and over held by the entire industry with the stocks of whiskey four years old and over held by the Big Four. Such a comparison is made in the chart below:

CHART #20

TOTAL STOCKS OF WHISKEY FOUR YEARS OLD AND OVER REMAINING IN BONDED WAREHOUSES [illegible]

[illegible] STOCKS HELD BY [illegible] COMPANIES

(Tax Gallons)



Source: Hearings before TNEC, op. cit., p. [illegible].

These figures are particularly significant because it is the stocks of aged whiskey that form the basis for the production of the more expensive blends and straight whiskeys. A supply of aged, straight whiskey is invaluable to a distiller, because it can be stretched many more times than its actual amount in the manufacture of blended whiskey.(3) This is done by a process of cutting or blending the original straight whiskey with grain neutral spirits. These grain neutral spirits do not require aging before use. Immediately upon manufacture they can be used in the process of blending along with other types of whiskey. Hence, a distiller in possession of a stock of aged whiskeys can considerably extend his supply by the application of grain neutral spirits. A large percentage of the whiskey sold is of the blended type.

A large stock of aged whiskey is also of great value to a distiller in that it allows him to enter into the production of the more expensive types of straight whiskeys. This latter type of whiskey accounts for a large volume of the high profit sales units of the industry.

Hence, the ownership by the Axis of a large portion of

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(3) BLENDED WHISKEY - There are, in general, two types of blended whiskeys (although the regulation definition of blended whiskey refers specifically to No. 2 following): (1) whiskey comprising a blend of two or more straight whiskeys and designed to combine the various characteristics inherent in each of the whiskeys making up the blend; (2) a blend of straight whiskey and neutral spirits: such a blend is known as "blended whiskey" which, under Federal Regulations, must contain at least 20% by volume of straight whiskey. There is also "spirit whiskey" which contains between 5% and 20% straight whiskey, the balance being neutral spirits or other whiskey. However, practically all blended whiskey placed on the market contains more than the minimum 20% of straight whiskey. The average ratios at the present time range from 30-40% whiskey and 60-70% neutral spirits. Whiskey blended with neutral spirits modifies the heavy "body" found in straight whiskey.

the aged stocks of whiskey in the country gives them a position of vastly enhanced economic control of the industry. They are in a position to market on a volume which assures them a profitable operation because of the ownership of supplies which are irreplaceable in the short run.

3. Distribution Facilities[4]

The foregoing indicates that the productive facilities of the whiskey industry are concentrated, to a large extent, in the hands of four large producers. However, a mere review of the amalgamation of the productive facilities of the industry fails to show completely the economic domination of the Axis firms. Not only has there been considerable concentration of the productive facilities of the industry, but there has been an equal consolidation of the distribution and marketing functions of the industry by the Big Four.

One of the most important means by which the Axis maintains control of the distribution facilities of the industry is through its control of the important brand names of whiskey. This means that the firms of the Big Four are in a much more advantageous position to deal with the various wholesale and retail outlets than the independent producer. By the control of certain name brands, the large distiller is in a position to dictate, virtually, to the wholesaler, who is, in turn, able to dictate to the retailer. A distributor is almost always dependent upon the sales of the established name brands of the

(4) The material in this section was taken from the TNEC hearings on the whiskey industry already cited and from personal contact with men engaged in the whiskey industry.

large distiller for a large portion of his revenue. An indication of the competitive advantage that this gives to the large distiller may be seen from the following illustration which describes a common occurrence in the industry. Let us assume that a wholesaler is handling the merchandise of one of the lines of the big four. Further, let us assume that he is desirous of adding the line of a smaller competitor of the big four. As soon as the large distiller is informed that the wholesaler is contemplating the addition of a competitor's line, the distributor is informed that the large firm would frown on any such action and would find it necessary to find another outlet for its products. The large distiller, if brought into a court, uses the defense that the addition of another line of merchandise would impair the marketing efficiency of the wholesaler. The additional line, it is said by the large distillers, would prevent the distributor from maintaining proper coverage of his products, and this would result in a fall in sales of both the large distiller's products and those of the small distiller. Thus, the wholesaler is virtually forced to deal exclusively with the large distiller or suffer the loss of his franchise.

The control of these various distributors have been accomplished by the big four in a number of ways. Frequently, instead of purchasing the entire equipment of the small distiller owning an important name brand, the big four merely

purchases the brand names of the distiller. The small distiller markets no bottled whiskey or invents a new brand name. If the small distiller markets no whiskey through the normal distributive channels, he may sell in bulk to the large distiller. An interesting variation on this device recently occurred in the industry with the purchase by the Schenley Distillers Corporation of the bulk stocks of the United Distillers Corporation. This had the effect of removing the bottled products of United Distillers from competition with the bottled products of the Schenley Distillers Corporation. United Distillers Corporation now is in the position of producing entirely for the Schenley Distillers Corporation. However, the usual method for the acquisition of a new brand is by outright purchase of the complete equipment and brand names of a small distiller by a member of the Axis. In such cases the Axis firm may operate the plant of the small firm, or it may close it completely. In any case, the Axis firm takes over the brand name of the distiller. Such a situation occurred in 194[illegible], when Joseph E. Seagram & Sons, Inc., purchased the Frankfort Distilleries. The production facilities of the latter company were operated by the Seagram firm, and whiskey was marketed under the old brand names.

Another practice which results in a considerable degree of integration of the distributive function is the practice of subsidizing a wholesaler. Let us assume that a large distiller is dissatisfied with the distribution of his products

in a certain area. The distiller has merely to revoke the franchise of the existing distributor and give it to another wholesaler. Frequently, however, instead of awarding the franchise to a different wholesaler, the distiller desires to establish an outlet over which he can maintain a firmer control. To accomplish this, a device similar to the old "Tied House" of the pre-prohibition era has been devised: the subsidized wholesaler. The distiller chooses a man to open a wholesale outlet in the particular area, and then helps him financially to establish the business. Often, the man chosen is one already in the employ of the company. By keeping the wholesaler in debt to the distiller, the latter is able to exert a large degree of control over the activities of the former.

Other devices by which the distiller maintains control over the distribution function are free gifts and extensions of credit. The large distiller is in a position to make "deals" with the wholesaler that could not possibly be equalled by the small independent manufacturer. Thus, for example, the distributor is given a bonus of certain types of merchandise if he will purchase so many cases of whiskey which the distiller may be trying to "push." The device of credit extensions is self-explanatory. Because of the superior resources of the large distillers, they are able to offer longer periods of payment for merchandise than the small distiller.

4. World War II and Concentration

World War II accentuated the trend of consolidation in the industry by the Axis. The most significant aspect of the concentration movement during this period was the entrance of the Big Four into wine production. Schenley acquired the Cresta Blanca Wine Company and The Roma Wine Company. National Distillers purchased The Italian Swiss Colony Company. Likewise, Seagrams became owners of Paul Masson, Inc., and Hiram Walker, of R. Martini Wine Company.

In 194[illegible], the Big Four produced [illegible]% of the wine in California, and, in 1945, controlled 50% of the stocks of wine undergoing the aging process. They had then about 25% of the storage capacity of the California wine industry.(5)

In addition to obtaining a substantial amount of the California wine industry during the war, the big firms branched out into other lines of endeavor. The most important of these enterprises was the barrel-making industry. During the war, a ceiling price on barrels was established by the O. P. A.. However, there was no ceiling price on white oak timber used in the manufacture of barrels. This had the effect of forcing many of the cooperage firms of the country out of business. These defunct firms were purchased by some of the larger distillers, principally the Schenley Corporation. The Justice Department looked into this situation during 1944 but could

(5) Report of the Smaller War Plants Corporation, Economic Concentration and World War II, (Washington, Government Printing Office), 1946, p. 230.

find no grounds for any legal action.(6)

Monopolistic Competition

Monopolistic competition may be defined as a market situation in which each seller has some control over the price. Chamberlin states that such a situation may arise from one or both of the following sources:(7)

1. Product Differentiation. If buyers consider the products of the various sellers to be different, if they have a definite preference for the product of one seller over the product of another seller, the products are no longer standardized. There may be significant physical differences, as in the case of radios or often the case with gasoline.

2. Smallness of the number of firms. In many cases the number of firms in the industry is sufficiently small that each seller realizes that the number of units which he places on the market will affect the price he receives. In other words, he realizes that he cannot sell an unlimited amount, that at each price there is only a definite sales potential.

Stigler adds additional criteria which seem helpful in considering the structure of the whiskey industry.(8)

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(6) Fortune Magazine, "The Whiskey Rebellion," Vol. XXXV, No. 6, June, 1947, p. 143.

(7) Chamberlin, E. H., The Theory of Monopolistic Competition, pp. 30-70

(8) Stigler, G. J., The Theory of Price, (New York, The Macmillan Co.), 1946, p. 197-217

3. <u>Vertical Integration</u>. "The ownership or control of plants which supply materials or markets for the finished product."(9)

4. <u>Restricting entry of new firms</u>.

5. <u>The prevention of price competition</u>.

The following material is an attempt to show how the post-prohibition industry meets these criteria:

1. <u>Product Differentiation</u>. The product of the whiskey industry today is not homogeneous, raw whiskey, but fully aged and bottled whiskey. That the product is highly differentiated is demonstrated by the large number of whiskey brands which are on the market. The four largest distillers jointly control about 90 brand names.(10) In addition, there are numerous small brands which come and go. Another indication that there is product differentiation can be seen in the large amounts spent on advertising by the whiskey industry, as indicated in the second chapter.

2. <u>Smallness of number of firms</u>. The smallness of the number of firms has already been discussed. The fact that each seller's activities affects the price they receive will be considered in the next section when consideration will be given to oligopoly and price policies.

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(9) Ibid., p. 209

(10) Moody's Manual of Investments, <u>Joseph E. Seagram & Sons, Inc.</u>, <u>National Distillers Products Corporation</u>, <u>Schenley Distillers Corporation</u>, <u>Hiram Walker & Sons, Inc.</u>, (New York, Moody's Investment Service), 1947.

3. Vertical Integration. It would appear that this condition is one found in the whiskey industry today. That this is true is particularly evident from the previous material presented on concentration. Many of the manufacturing plants have been concentrated in the hands of a few firms, as well as much of the aged stocks. In addition, there has been vertical integration in that the distiller has considerable control over distribution through the wholesaler and retailer.

4. Restricting entry. The accumulation of stocks is the most effective obstacle to the entrance of new firms into the whiskey producing industry. In order to have a product to market it is necessary to be in possession of stocks of aged whiskey. A new firm would have difficulty in obtaining stocks of aged whiskey from a bulk producer. Most of the stocks in the whiskey industry are not for sale. In addition, it would require a period of time of from three to six years for a distiller to produce stocks of aged whiskey. The profit outlook for the small firm is not sufficiently favorable to engender the amount of investment required to erect a distillery and produce whiskey and then wait a minimum of three years until the product can be marketed and profits earned. This is indicated by the chart below showing profits in the whiskey industry by size groups.

Table #21

DISTILLED LIQUOR MANUFACTURING CORPORATIONS

Summary of investment, sales and profits for 17 companies by size groups for the year 1940

(Add 000 to amounts)

# of corps.	Aggregate total Investment	Aggregate Sales	Aggregate profit after taxes but before debt interest	Average Rate of return after income tax but before debt interest
	Amount	Amount	Amount	Percent
5	$4,105	$4,914	Assets under $1,500 116	2.86
4	8,610	20,342	Assets $1,500-$6,999 113	1.32
4	33,923	78,573	Assets $7,000-$21,999 1,191	3.52
4*	179,578	278,532	Assets over $22,000 17,913	9.98
17	226,116	382,361	24,873	9.55

*Schenley Distillers Corporation
National Distillers Products Corporation
Jos. E. Seagram & Sons, Inc.
Hiram Walker & Sons, Inc.

Source: Federal Trade Commission Industrial Corporation Reports, Distilled Liquors Manufacturing Corporations (Washington, U. S. Government Printing Office), Sept. 18, 1942, p. 7.

The four companies with an aggregate total investment of $179,578,000 earned a profit of 9.98% before the deduction of debt interest but after income tax deduction. On the other hand, four manufacturers with an aggregate total investment of only $8,615,000, earned a return of only 1.32% before the deduction of debt interest but after income tax deduction.

5. <u>The prevention of price competition</u>. The government, both on the Federal level and on the local level, has supported the elimination of price competition in the whiskey industry through the enactment of laws allowing price maintenance agreements.

Fair-Trade Acts applicable to the sale of all commodities, including alcoholic liquors, have been enacted in all the States except the District of Columbia, Missouri, Texas, and Vermont. These Acts are permissive in character in that they authorize the making of certain price-fixing contracts which otherwise might violate the State anti-trust laws.(11)

The Wholesale Posting Law and certain provisions of the Unfair Sales Act of the State of Massachusetts represent a typical set of price maintenance laws.(12) The Wholesale Posting Law makes discrimination against any wholesaler or retailer by any manufacturer or wholesaler illegal. Not only does the law prohibit price discrimination, but it also prohibits such discrimination that may exist in discount rates, rebates, free

12 (11) <u>Fair Trade Provisions Specifically Affecting the Liquor Industry</u> (Washington, Distilled Spirits Institute, Inc.) 1948.
13 (12) <u>Ibid.</u>, "Massachusetts Fair Trade Provisions."

goods, allowances, or any other form of enducement. The means of enforcement are in the regulations which require wholesalers and manufacturers to post their wholesale prices with the Alcoholic Beverage Commission on or before the tenth of each month. The lists are open for inspection by any interested party. If a retailer feels that he has had to pay a higher price than some other retailer, he may make a complaint to the commission. The commission makes an investigation. If evidence of discrimination is found, the commission calls in the offending party for a hearing and attempts to settle the matter out of court. If this proves to be ineffective, the offending party is brought to court.

While this law does not prohibit price cutting, it does limit the effectiveness of "tied houses" and protects the small retailer. However, in conjunction with the two other provisions of the Fair Trade Act, which have bearing for the liquor industry, it considerably limits price cutting activities. The first of these laws is the Unfair Sales Act which makes it mandatory to sell at a price above cost. This Act is supposed to make it difficult for the wholesaler or manufacturer through retail outlets to flood the market of an area in an attempt to drive out a competitor. The second of these Fair Trade Laws has two provisions which are pertinent to the liquor industry. The first provision makes it mandatory for the retailers of the state to sell the same product at a uniform price. The latter provision of the law provides the

legal sanction for a practice that has long been widespread in the liquor industry of allowing the manufacturer to set the retail price and enter into contractural agreements with the wholesalers and retailers to sell the product at the company set price.

Price Policies

According to Stigler, a condition of oligopoly exists when the price policy of one firm has an influence on the price policies of other firms.(13) Such a situation appears in the post-prohibition whiskey industry. Because of the limited scope of this paper, price policies of the various firms of the industry cannot be considered individually. However, there appears to be ample evidence in the periodic price wars of the industry to indicate that the price policies of one firm have a direct influence on the price policies of other firms. It would seem that the dominant firms in the industry operate on the assumption that the demand for the products of their firms is relatively elastic. By inducing the public to concentrate their purchases of whiskey on the products of the particular firm, that firm hopes to achieve a market which which is insensible to shifts in consumer purchases. Each firm hopes to achieve an inelastic demand schedule and a position of dominance in the industry. A firm's desire to achieve a position of

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(13) Stigler, op. cit., p. 260.

dominance in the industry frequently leads to price cutting. However, price cutting by one firm in the industry soon leads to price cutting by other firms in the industry.

The struggle for dominance in the entire alcoholic beverage industry has always been over whiskey, which accounts for [illegible]% of the distilled beverages sold in the United States.(14) By offering wholesalers discounts as high as 40%, allotting them free goods with volume orders, extending credit, and other forms of persuasion, distillers induce the wholesalers to take on more liquor than they may have wanted. Through the jobbers, the distillers offer similar inducements to retailers, cajoling them into promoting first one brand and then another. As the market loads up, distillers resort to outright price cutting. These tactics reach perfection in large cities - particularly in the key market of New York City where about [illegible]% of all U. S. liquor is sold and where brand leadership has often been determined for the whole United States.(15)

In the sales race in the 193[illegible]'s first National and then Schenley led the field. However, Seagrams captured leadership after the industry's price war in 19[illegible]-19[illegible]. By 1940, the drive for volume produced the inevitable result: wholesalers and retailers had more stock on hand than they could sell at existing prices. The distillers offered higher discounts than

(14) Fortune Magazine, June, 1947, p. 14[illegible].
(15) Distilled Spirits Institute Annual Report, 1947, (New York, Distilled Spirits Institute, Inc.), 194[illegible], p. 9[illegible].

ever before. While the big distillers fought for leadership, the discounts passed the 40% mark. Relayed to the retailer, they ended up as reduced prices for the consumer, who, by October, 1940, was able to purchase a $2.[illegible]7 fifth of whiskey for as little as $1.59.(16 In 1940, Schenley and National gave up, leaving Seagrams on the top of a saturated market.

Implications of the Prohibition Era

The resultant influences of the prohibition period have been responsible, in part, for the economic structure of the post-prohibition whiskey industry.

The demand for alcoholic beverages in the immediate post-prohibition era was influenced by the peculiar nature of consumption and production engendered by the prohibition era. With the repeal of the 18th Amendment, the bar and package store took the place of the speakeasy and home production. To supply this demand, the distiller entered into distribution functions. This was one of the factors responsible for the vertical integration of production and distribution in the post-prohibition industry.

Another factor responsible for integration was foreign penetration. With the repeal of the 18th Amendment a large demand existed with small facilities for supplying this demand.

(16 *Fortune Magazine*, *op. cit.*, June, 1941, p. 141.

17

This provided a natural opportunity for penetration by those firms existing in countries that had not experienced periods of prohibition. The entrance of foreign distillers into production in the United States further introduced elements of product differentiation and encouraged vertical integration of production and distribution. Canadian and English distillers were accustomed to producing fully aged, bottled whiskey.[17] British and Canadian distillers had operated on a vertically integrated pattern for a number of years previous to their entry into the American industry. They did not produce in bulk and sell to a rectifier, who completed the processes of ageing, bottling and distribution but entered into the complete production process as well as many of the functions of distribution. Upon entering the American industry, the British and Canadian distillers followed the same pattern of integrated production and distribution operations which were part of their pattern in producing for the home market. This established a pattern for the American distiller.

Government regulation became an integral part of the post-prohibition period because of the need to protect the consumer from poor types of whiskey such as were produced during the prohibition era, and because of the desire of the government to exclude "undesirables" of the prohibition era from authority in the re-established industry. Government intervention [illegible]

18

17. *Fortune Magazine*,"Distillers Co., Ltd.," Vol. [illegible], p. [illegible].

to the advantage of large producers and has limited entry into the industry. In its attempt to protect the public from poor quality whiskey, the government has fostered the concentration movement. The large, integrated producer, by the nature of his operations, seldom runs afoul of such prohibited practices as misbranding and false advertising. In addition, the control of stocks of aged whiskey by the large producers has done much to discourage the entrance of new firms into the industry. A new firm would be unable to purchase any aged stocks of whiskey to enter into immediate selling activities. Hence, it would be necessary to assume all of the expenses of production without any possibility of returns for three to six years. This control of aged stocks of whiskey by the large producers has also meant the decline of the rectifier and blender. The rectifier and blender are dependent on purchases of aged whiskey from bulk producers. However, as more and more of the producers in the industry are being absorbed by the axis, the rectifier is being cut off from his supply. This is shown by a decline in the number of rectifiers in the industry from 260 to 148 during the years 1935-1939.(18)

This repeal of prohibition provided excellent profit opportunities for those in possession of large stocks of whiskey or adequate productive facilities. The four companies which now dominate the U. S. industry gained control over

(18) Census of Manufacturing, 1935, 1937, 1939

almost the entire stock of whiskey at the time of repeal. In addition, they were the first firms in production at this time. Hence, they were able to obtain an important foothold in the industry. This restricted the ability of new firms to enter the industry because the dominant firms controlled most of the stocks.

The firms that were originally dominant in the industry were able to rapidly expand their productive facilities because of the large profits which they earned. Although many other firms attempted to enter the market to take advantage of the favorable profit outlook, they were not as successful as the firms originally controlling the greatest portion of stocks and productive facilities.

CHAPTER IV

SUMMARY AND CONCLUSIONS

SUMMARY AND CONCLUSIONS

The objective of this paper has been to determine the extent to which the era of prohibition has influenced the development of the post-prohibition whiskey industry. To provide background material, certain aspects of the pre-prohibition industry have been considered in the first chapter.

Two important generalizations can be made about the structure of the whiskey industry during this early period. First, it can be said that the industry was composed of a large number of small producers. In addition, the distiller of this era was engaged in only a small part of the production of finished, bottled whiskey. The functions of aging, blending, bottling, and distributing were performed by a large number of small middlemen. The product of the pre-prohibition distiller was of a standardized, homogeneous nature and was traded on an organized exchange in Peoria. Thus, the manufacturers of raw whiskey did not engage in any advertising activities. In addition, the production of each distiller was small relative to the total production and exerted little influence on price. Further, there are indications that a certain amount of freedom of entry existed. In summary, a cautious generalization of this period would be that it was one in which the structure of the industry tended to foster a relatively pure type of competition.

As a second generalization concerning this period, it

could be said that the whiskey industry was characterized by various attempts at some form of monopoly control. The first of these was a pooling agreement in 1871 which soon ruined with a large increase in whiskey exports due to surplus from failures in Europe. When exports of whiskey declined, due to an improved agricultural situation on the Continent, the Western Export Association was formed to subsidize exports through assessments of member firms. This soon collapsed when certain member producers refused to pay their assessments. In 1885 the Distillers' and Cattle Feeders' Trust was formed along the lines of the Standard Oil Trust. However, although successful in maintaining price and eliminating competition, the Trust was dissolved in 1889 because of public sentiment against the various combinations attempting to monopolize prices at this time. The Distilling and Cattle Feeding Company was organized to take its place in 1889. This company enjoyed a life span of only six years. Its charter was revoked in 1895 by the Illinois Supreme Court. The American Distilling Company was founded eventually upon its remnants. This company was soon acquired by the Distillers Securities Corporation. This latter holding company emerged as the National Distillers Products Corporation after repeal of the 18th Amendment.

With the repeal of the 18th Amendment, certain conditions existed as a result of the era of prohibition which had implications for the development and structure of the post-prohibition industry. The second chapter is devoted to a consideration of these factors.

One of the most important of these factors was demand. Demand had continued to exist during the period of prohibition and had been supplied by various types of illicit production. The illegality of production and consumption during the prohibition era gave rise to the speakeasy and home production. Upon repeal of the 18th Amendment and the reëstablishment of the industry, the speakeasy became the cocktail lounge and the package store took the place of home production. In addition, the high demand existing at the time of repeal encouraged foreign penetration of the American market. Foreign distillers introduced the elements of product differentiation by the distiller into the American industry. Foreign penetration, changes in patterns of consumption, and the resultant product differentiation by the distiller induced changes in production and distribution. The distiller entered into all phases of production---ageing, blending, and bottling---and also entered into many areas of distribution.

Another influence arising out of the era of prohibition was increased government intervention into the activities of the industry.

the Federal Government designed to protect the consumer from poor quality whiskey and prevent "undesirables" from engaging in any phase of the whiskey industry.

Finally, the element of high profits which came about because of the existence of a high demand and an inadequate supply, had influence upon the development and structure of the whiskey industry. Those firms which received their original impetus from foreign sources, and which were able to gain an early control over inventories and production facilities, were able to extend their original advantage because of high rates of return which they earned.

In the third chapter an attempt is made to relate the structure of the post-prohibition industry to the influences arising out of the Era of Prohibition.

An examination of the structure of the industry reveals that the production and distribution facilities are concentrated in the hands of four large producers--Seagrams, Schenley, National Distillers, and Hiram Walker. In addition, the existence of an imperfect type of competition seems apparent. ~~The~~ Five criteria of imperfect or monopolistic competition were set up and applied to the industry.

1. Product differentiation
2. Smallness of number of firms
3. Vertical integration
4. Restricted entry
5. Prevention of price competition

Finally, an attempt was made to show how the influences coming out of the prohibition era may have been responsible for the type of monopolistic competition which exists.

The changes in demand resulting from the prohibition era and foreign penetration reacted to introduce product differentiation into the activities of the distiller. These two factors also introduced vertical integration as a natural corollary of product differentiation. The distiller found it necessary to enter into all phases of production and distribution.

Government regulation has been an important part of the whiskey industry and has been responsible, in a small manner, for the integration and concentration that has occurred. Government intervention has also helped, to a certain extent, to limit entry of new firms in the whiskey industry. However, the control of aged stocks by the large firms has been the most important factor in restricting the entry of new firms.

The repeal of prohibition provided excellent profit opportunities for those firms in possession of stocks or productive facilities. The firms originally controlling production and stocks continued to do so because of the high profits which they earned and reinvested in additional stocks and productive facilities.

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Appendix A Fundamentals of whiskey making

FUNDAMENTALS OF WHISKEY MAKING

First Steps in Whiskey Making. Whiskey is made from grain. Bourbon is made from a mash containing 51% or more corn grain, rye from a mash containing 51% or more rye grain. Most bourbon mash also contains rye and malted barley, rye mash contains usually corn and malted barley. The grain is ground to a meal and cooked with malt and water. Malt is sprouted barley just as grain sprouts when planted. While the grain contains no dextrose but only starch, malt changes the grain starches into dextrose so that they will ferment. This is necessary because yeast, the fermenting agent, cannot act on starch but can and does act on fermentable sugars, such as dextrose (grain sugar), fructose (fruit sugar), etc.

The fermentation process is activated by the use of yeast. Yeast cells change the grain sugars into alcohol, carbon dioxide gas and secondary compounds. The carbon dioxide passes off or is recovered and made into dry ice or other by-products. After 3 or 4 days, the yeast has done its work. Distillers use only the finest cultured yeast (as opposed to wild yeast); their chemists spend years breeding and perfecting the yeast strains, the natures of which are jealously guarded trade secrets. No yeast strain is exactly like any other and most distilling companies have been caring for their particular yeast cells for many years.

Then comes distillation. The science of distilling has been practiced for centuries. The principle of distillation

is simple: both alcohol and water become vapors under heat, alcohol vaporizing at about 173 degrees Fahrenheit and water at 212 degrees Fahrenheit. When the mixture is heated, the alcohol passes off as a vapor and goes through long coils where it is condensed into a liquid--and comes out of the still as new whiskey.

Whiskey must be aged. Like tobacco, whiskey has to be cured and aged before it is ready to be enjoyed. Raw whiskey as it leaves the still is a colorless liquid and a very far cry from the smooth, flavorful, mellow product as the consumer knows it. In other words, whiskey is not mature WHISKEY until it is properly aged.

American whiskey is aged anywhere from two to eight years--the average age is four years. Thus, normally, a whiskey which is made in, say, January, 1942, does not reach the market until January, 1946. Some rye whiskey will mature more quickly than other rye--some bourbon more quickly than other bourbon--depending on numerous factors, such as temperature, atmospheric conditions, the age and character of the barrels and the way in which the whiskey is made. Generally speaking, however, bourbon whiskey will reach full maturity more quickly than rye whiskey.

Our Federal laws require that all whiskey must be tax-paid and taken out of bond at the end of eight years. Scotch whiskey is aged much longer (as much as 20 years, generally eight years).

When whiskey leaves the still, it is placed in charred

oak barrels and kept in warehouses under the supervision of the United States Government. The barrels allow air to filter in, the oxygen and the compounds in the wood interacting with the whiskey over a period of years to give it color, flavor, character and mellowness.

All during the ageing process, a certain amount of the whiskey is lost through leakage and evaporation. Over a period of years, these losses are substantial. For example, over a four-year period, about [illegible]% of the whiskey originally stored away is lost in this manner.

The ageing of whiskey in charred barrels is essential. Chemistry, despite all its advances, has failed to find a quicker method.

When the whiskey leaves the Government warehouse, it is bottled. Whiskey undergoes no change in taste and flavor or "age" once it has been sealed in the bottle.

Summarized from Liquor Store and Dispenser, October, 194[illegible].

Appendix B Glossary of Terms

GLOSSARY OF TERMS

Ageing--Whiskey must be aged. Ageing means the storage, after distillation and before bottling, in oak containers. In the case of American-type whiskies produced on or after July 1, 1936, other than corn whiskies, it means storage in charred, new oak containers. Corn whiskey need not be aged in charred barrels. (However, when corn whiskey has been treated with charred oak chips or stored in charred oak barrels, it becomes bourbon whiskey.)

The product which first emerges from the still during the production process is colorless and has little of the taste, body or general characteristics of the product ultimately offered to the consumer. When the whiskey is laid away for ageing, however, it develops color, flavor, character. The ageing process involves essentially a reaction between the wood and the whiskey, or other spirit compounds over a period of time.

Technically there is a maximum maturation period in the ageing of each barrel of spirits--a point in ageing beyond which the spirits no longer improve in character or taste. Various whiskies reach the peak of perfection at some time during this age span--depending on their individual character. The period of ageing in Government bonded warehouses in this country is limited to eight years, at the end of which time whiskey must be tax-paid and withdrawn from the warehouse.

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In the United Kingdom, there is no limitation on the length of time which whiskey may be aged tax-free in bonded warehouses; accordingly, Scotch whiskey is frequently aged as long as 20 years. In Canada, there is a tax-free age limitation of 15 years.

<u>Alcohol</u>--See "Neutral Spirits."

<u>Alcoholic Beverages</u>--The term alcoholic beverages, whenever used is taken to mean distilled spirits, wines and malt beverages collectively.

<u>Blended Whiskey</u>--There are, in general, two types of blended whiskies (although the regulatory definition of "blended whiskey" refers specifically to No. 2 following): (1) whiskey comprising a blend of two or more straight whiskies and designed to combine the various characteristics inherent in each of the different whiskies making up the blend; (2) a blend of straight whiskey and neutral spirits; such a blend is known as "blended whiskey", which, under Federal regulations, must contain at least 20% by volume of straight whiskey. There is also a "spirit whiskey" which contains between 5% and 20% straight whiskey, the balance being neutral spirits or other whiskey. However, practically all blended whiskey placed on the market contains more than the minimum of 20% of straight whiskey. The average ratios at the present time range from 30-40% for straight whiskey and 60-70% for neutral spirits. Whiskey blended with neutral spirits is relatively light and mild. The neutral spirits tend to modify the heavy "body"

found in straight whiskey.

Blending Spirits--See "Neutral Spirits."

Bonded Warehouse--See "U. S. Government Bonded Warehouse."

Bottled in Bond--Beverage spirits of 100 proof, which have been stored continuously for at least four years in wooden containers, may be bottled in bond. Whiskey (or other spirits) must be of same distillation and season of inspection and made in same distillery. Under Federal regulations, the distiller, if he so chooses, is allowed to bottle this whiskey without paying the excise tax, provided he keeps the bottled product in a bonded warehouse until he is ready to remove it and put it into consumption channels. When the bottled-in-bond whiskey is removed, it is then tax-paid by the distiller. Whiskey bottled in bond is bottled under supervision of the United States Government. Actually, all whiskey is supervised by Government officers with respect to proof, production, labeling, etc. Although some rum, gin and brandy are bottled in bond, the amount is negligible in relation to the volume of whiskey bottled in bond.

Bourbon--Under Federal regulation, bourbon is whiskey distilled from a fermented mash of grain containing at least 51% corn grain--the balance may be any other grain but is generally rye and barley malt. Bourbon must be stored in new charred oak barrels or treated with charred oak chips.

Brandy--Brandy is a distillation of fermented mash of fruit or fermented fruit juices. The raw materials used in brandy are,

in the order of their importance, grapes, raisins, apples, peaches and small quantities of other fruits. In general usage, brandy refers to grape brandy--apple brandy is usually known as apple jack, cherry brandy as kirsch or kirschwasser, etc. France is the principal brandy-producing country of the world, although the United States also produces a sizable volume of American brandy. "Cognac" is a brandy produced in the Cognac area of France.

Distilled Spirits--Distilled spirits comprise whiskey, gin, rum, brandy, neutral spirits, cordials or liqueurs, etc., made by a distillation process and usually containing at least 20% of alcohol by volume. (See individual names for descriptions of each type.)

Distilling--For a brief description of the distilling process, see "Fundamentals of Whiskey Making," Appendix B.

Dried Grains--This product consists of solid material obtained from stillage. Through screening, the coarse solids are removed and by drying, the moisture content is greatly reduced. Dark distillers' grain is processed from whole stillage. Light distillers' dried grain consists of the suspended solids in the whole stillage. This product is obtained by drying the liquid resulting from the screening. All distillers' dried grains are important factors in supplying the needed nutrition in mixed feed formulae for animals. The added protein content is particularly valuable.

Evaporation and Leakage Losses--See "Losses from Evaporation and Leakage."

Excise Tax--The excise tax, as it is generally used, refers to the tax levied by the Federal Government on distilled spirits, malt beverages and wines (alcoholic beverages). (However, 26 of the State governments and the District of Columbia levy a state excise tax on distilled spirits. Excise taxes on wines and malt beverages are also levied by various States. The State distilled spirits excise taxes vary from 50¢ per wine gallon in the District of Columbia to $2.72 per wine gallon in South Carolina.) The Federal excise tax, which is only one of the many Federal taxes levied on alcoholic beverages, must be initially paid by the producer (or other owner), absorbed as part of the cost price by the wholesaler, in turn, absorbed by the retailer, and ultimately paid by the consumer. The current Federal excise rate of distilled spirits is $9 per tax gallon. (Other Federal taxes levied on distilled spirits include customs duty, rectification, strip stamp, taxes on stills and occupational and dealers' license taxes.) The current Federal excise tax on malt beverages is $8 per barrel of 31 gallons (26¢ per gallon) and on wines at various rates--i.e., on wines containing up to 14% of alcohol by volume, the Federal rate is 15¢ per gallon on wines containing 14 to 21% of alcohol by volume, the Federal rate is 60¢ per gallon and on wines containing from 21 to 24% of alcohol by volume $2.00 per gallon. The Government also levies various occupational taxes on dealers in wine and malt beverages.

Gin--Gin is made from a base of neutral spirits. There are two methods of processing gin: (1) Distillation--The neutral

spirits are run through a gin still, in which there are trays containing herbs and other flavoring matter such as juniper, orange peel, coriander seed, etc. As the alcoholic vapor rises, in the process of being distilled, the volatile agents in the flavoring material are also distilled off. (2) Compound Gin--Obtained by mixing neutral spirits with flavoring materials (chiefly oil of juniper or juniper flavor) or gin essence or distilled gin.

Neutral Spirits--According to the regulatory definition, "Neutral spirits, or alcohol, are distilled spirits distilled from any material at or above 190 proof. During the period of the unlimited national emergency proclaimed by the President on May 27, 1941, the term neutral spirits also includes any spirits distilled at less than 190 proof which are so distilled or so treated in the process of distillation, or so refined by other processes after distillation, as to lack the taste, aroma and other characteristics of whiskey, brandy, rum or other potable beverage spirits." For the sake of convenience, the term neutral spirits has been used to include both spirits produced at industrial alcohol plants for beverage purposes and neutral spirits as above defined produced in registered distilleries for beverage purposes. These spirits are used for blending with straight whiskey, making gin and cordials or liqueurs. They may be produced from grain or molasses or from a redistillation of other beverages, such as brandy and rum. Neutral spirits are customarily made from the same raw materials as whiskey--namely,

grain, yeast and water. Neutral spirits are frequently stored in wood barrels, although under Government regulations no age claim may be made in such cases. Thus, in effect, grain neutral spirits are an extremely light-bodied whiskey-type distillate.

Proof Gallons--According to the definition of the Internal Revenue Code, a standard "Proof Gallon" is a "wine gallon of an alcoholic mixture containing 50% of ethyl alcohol by volume. In a wine gallon containing more or less than 50% of ethyl alcohol by volume, the number of proof gallons is proportionately greater or smaller than 1 proof gallon." Proof gallons are frequently confused with wine gallons. A wine gallon is a physical measurement of capacity--the standard wine gallon contains 231 cubic inches. A proof gallon is a gallon (231 cubic inches) containing 50% alcohol by volume. The data reported by the Department of Commerce relating to imports uses the term, "proof gallon" as defined in the Tariff Act of 1930. This law provides that "each and every gauge or wine gallon of measurement shall be counted as at least one proof gallon..." In order to avoid confusion caused by the use of a single term denoting two different things (under the provisions of the Internal Revenue Code and the Tariff Act of 1930), this handbook has changed the designation "proof" gallon to "wine" gallon in all Import for Consumption data.

Rectification--The process by which distilled spirits are blended together, or otherwise processed by the addition of spirits or flavoring or coloring material. For example, straight whiskies are rectified by blending them with neutral

spirits; neutral spirits with the aid of flavoring essences and other materials are transformed into cordials or liqueurs, etc.

Rum--This spirit is distilled from the fermented juice of molasses or other cane products or by-products.

Rye--Under Federal regulations, rye is a whiskey distilled from a fermented mash of grain containing at least 51% rye grain--the balance can be any other grain, and is usually corn and malted barley. Such whiskey must be stored in charred new oak containers.

Scotch Whiskey--Always refers only to whiskey produced in Scotland and manufactured in compliance with the laws of Great Britain. Any similar product made outside of Great Britain must include the word "type" and read "Scotch Type Whiskey." Scotch whiskey is made chiefly from barley; the production process is similar to that used in this country except that the malted barley (which converts the grain starches into sugar) is kiln-dried over a peat fire. The peat smoke impregnates the barley and ultimately gives the Scotch whiskey a smoky taste. Most Scotch whiskey is blended--a blend of malt and grain whiskies, the former a heavy-bodied whiskey produced from malted barley and the latter a lighter-bodied whiskey made usually of corn.

Straight Whiskey--The regulatory definition defines "straight whiskey" as an alcoholic distillate from a fermented mash of grain distilled at not exceeding 16_ proof and aged for not less than 24 calendar months if bottled on or after July 1,

1938. If different straight whiskies are blended together, the resultant product must be called a blend of straight whiskies. See also, "Whiskey."

Tax Gallon--This refers to the unit of spirits subject to the Federal excise tax (currently $9.00). A gallon of spirits of 100 proof would be subject to a tax of $9.00, while a gallon of spirits of 110 proof would be subject to a tax of $9.90 when withdrawn from bond. However, where spirits are less than 100 proof, the tax is based upon the wine (physical) gallonage rather than the proof content. For the most part tax gallons and proof gallons are synonymous.

U. S. Government (Internal Revenue) Bonded Warehouse--Distilled spirits (except for cordials and liqueurs and sometimes gin) are stored in U. S. Government bonded warehouses following production--usually for ageing. The excise tax is not payable until they are withdrawn, except for bottled-in-bond spirits. Distilled spirits are usually stored in barrels approximating 50 gallons capacity each, although neutral spirits may also be stored in tanks or steel drums. The warehouses are set up under the laws and regulations of the Bureau of Internal Revenue. Although the proprietor of a bonded warehouse is a private individual or firm, the operations as well as the warehouse itself are kept under the direct supervision of officers of the Bureau of Internal Revenue, who carry the keys to the warehouse, keep a Government record of all entries and withdrawals of spirits, etc. The warehouse owner may enter the premises only in the presence of a Government officer. No

spirits may be withdrawn except with Government permission.

Whiskey--Defined by Federal regulation as an alcoholic distilled in such a manner that the distillate possesses the taste aroma and characteristics generally attributed to whiskey. See also, "Straight Whiskey."

Wine Gallon--A wine gallon is a physical measure and has no relationship to the "proof" or alcoholic content of a particular beverage. Thus, a standard United States gallon contains 231 cubic inches. A standard U. S. gallon of 190-proof spirits is a wine gallon (but is 1.9 proof gallons), while a gallon of 80-proof spirits is also a wine gallon (but only 0.8 proof gallons).

Summarized from Beverage Distilling Industry Facts and Figures, 1934-1945.